



THE REGENTS QUESTIONS.

1866-1876.



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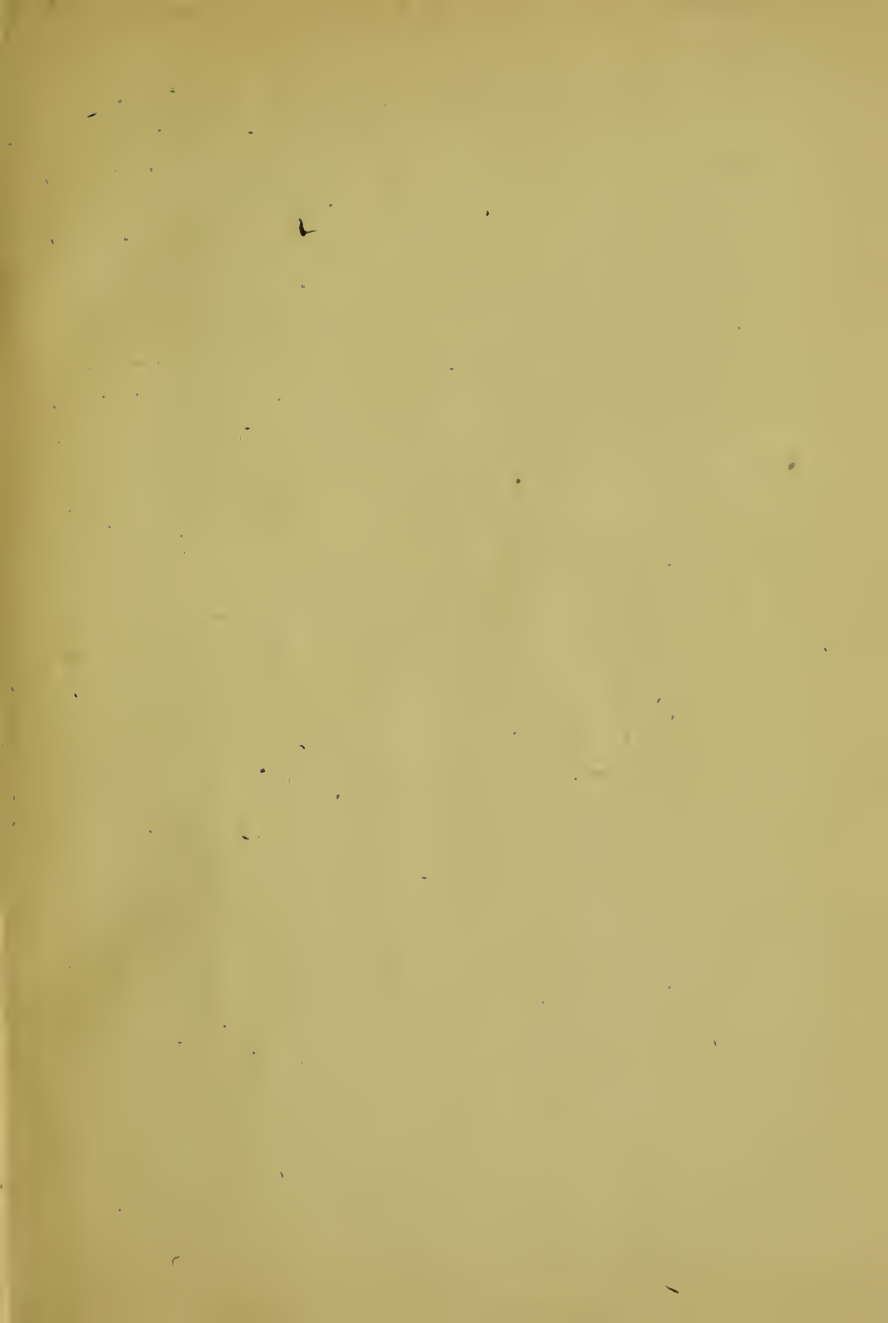
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UNITED STATES OF AMERICA





Yours very truly
John V. I. King
Chancellor of the University

THE
Regents' Questions

1866 TO 1877,

BEING THE QUESTIONS IN ARITHMETIC, GRAMMAR AND GEOGRAPHY, USED IN THE PRELIMINARY EXAMINATIONS FOR ADMISSION TO THE

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PREPARED BY THE

REGENTS OF THE UNIVERSITY,

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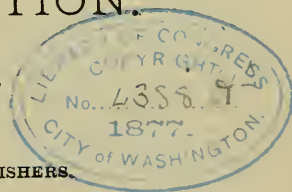
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THE
REGENTS' QUESTIONS,
1866-1877.

ARITHMETIC.

Examination I. Nov. 8, 1866.

(10:00 A. M.-12:00 M.)

1. Write in figures each of the following numbers, add them, and express in words (or numerate) their sum : fifty-six thousand, and fourteen thousandths ; nineteen, and nineteen hundredths ; fifty-seven, and forty-eight ten thousandths ; twenty-three thousand five, and four-tenths ; and fourteen millionths.

2. What is the difference between $3\frac{3}{4}$ plus $7\frac{5}{8}$, and 4 plus $2\frac{3}{4}$?

3. In multiplying by more than one figure, where is the first figure in each partial product written, and why is it so written ?

4. If the divisor is 19, the quotient 37, and the remainder 11, what is the dividend ?

5. What is the quotient of 65 bu. 1 pk. 3 qt. divided by 12 ?

6. Which one of the fundamental operations (or ground rules) of arithmetic is employed in reduction descending? Give an example.

7. In exchanging gold dust for cotton, by what weight would each be weighed?

8. What is the only even prime number?

9. How many weeks in 8,568,456 minutes?

10. To what *term* in division does the *value* of a common fraction correspond?

11. What is the product of a fraction multiplied by its denominator? Give an example.

12. What is the rule for the multiplication of decimals?

13. How is a common fraction reduced to a decimal? Give an example.

14. What is *ratio* and how may it be expressed? Illustrate by an example.

(2:30-4:30 P. M.)

15. If 27 tons 3 qrs. 15 lbs. of coal cost \$217.83, what will 119 tons 1 qr. 10 lbs. cost?

16. Find the cost of the several articles, and the amount of the following bill:

UTICA, October 1, 1866.

A. P. JEWETT to SAMUEL PALMER, Dr.

To	16750	feet of board at	\$12.50	per M.,	. - -
"	1750	"	24.00	"	- - -
"	3500	"	25.00	"	- - -

Received payment, \$

SAMUEL PALMER.

17. What is the length of the side of a cubical box which contains 389,017 solid inches?

18. What is the present worth of the following note discounted at bank, and when will it become due:—

\$100. ALBANY, October 11, 1866.

Ninety days from date, for value received, I promise to pay to the order of John Smith, one hundred dollars, at the Albany City National Bank.

JOHN BROWN

19. Involve $\frac{5}{8}$ to the 7th power.
20. What is the square root of .0043046731?
21. Sold 9 1-6 cwt. of sugar at $\$8\frac{1}{4}$ per cwt., and thereby lost 12 per cent. : how much was the whole cost?
22. A person owned $\frac{5}{8}$ of a mine and sold $\frac{3}{4}$ of his interest for \$1710 : what was the value of the entire mine?
23. When it is 2 h. 36 m. A. M., at the Cape of Good Hope, in longitude $18^{\circ} 24$ m. east, what is the time at Cape Horn, in longitude $67^{\circ} 21$ m. west?
24. What is the cost of 17 tons 18 cwt. 1 qr. 17 lbs. of potash at \$53.80 per ton.

Examination II. March 1, 1867.

(10:00 A. M.—12:00 M.)

25. Express in words the number 42567000129301.
26. Multiply five hundred and forty thousand six hundred and nine by seventeen hundred and fifty.
27. Give the rule for reduction descending.
28. How many steps of two and one-half feet each would a man take in walking a mile?
29. How is a whole number reduced to a fraction of the same value having a given denominator?
30. What is the value of $\frac{2}{8}$ of $\frac{3}{8}$ of $\frac{1}{4}$ of $\frac{1}{2}$ when reduced to a simple fraction of the lowest terms?
31. Give the rule for reducing several fractions to equivalent fractions having the least common denominator.
32. Add $3\frac{3}{8}$ to 4 21-38.
33. Write in figures, two and six hundred-millionths.
34. Reduce 1375-8836 to a decimal.
35. Multiply seven thousand and five, by three hundred, and five millionths.
36. Divide 126.45 by 493.256.
37. The ratio of two numbers is 9, and the antecedent 90 : what is the consequent?

38. Find the value of the omitted term in the following proportion:—

$$\$4 : (?) :: 9 : 16.$$

(2:30–4:30 P. M.)

39. If 5 $\frac{1}{2}$ lbs. of butter cost \$15.68, what will .078 of a ton cost?

40. If 96 horses eat 192 tons of hay in one winter, how many tons will 150 horses eat in 6 winters?

41. In 1 yr. 4 mo., \$311.50 amounted to \$336.42 at simple interest: what was the rate per cent?

42. What is the interest of \$14231.50 from June 29, 1860, to April 30, 1865, at 8 $\frac{1}{4}$ per cent?

43. Three notes are payable as follows:—one for \$200, January 1, 1866; another for \$350, due September 1, 1866; a third for \$500, due April 1, 1867: what is the average of maturity, or the equated time of payment?

44. How much will it cost to carpet a parlor 18 feet square, with carpeting $\frac{3}{4}$ yd. wide, at \$1.50 per yard?

45. The difference in the local time of two places is 2 h. 18 m.: what is the difference in longitude?

46. 33 is 2 $\frac{3}{4}$ per cent. of what number?

47. What is the length of each side of a square field which contains five acres?

48. A note for \$470.66 drawn at 60 days, is discounted at bank at 6 per cent.: what are the proceeds?

Examination III. June 14, 1867.

(10:00 A. M.—12:00 M.)

49. Express in figures MDXXVCDLXXXIX.

50. Perform the operations indicated as follows:—

$$102 - 19 \times 17 \text{ plus } 205 \div 3 = (?)$$

51. Numerate (or express in words), 90067236708.

52. What is the sum of 3912, 361, 40005, 98, 736863, 8342, 2900687, 9, 4000862, 28?

53. If two persons start from the same place, and travel in the same direction, one 7 and the other 11 miles per hour, at the rate of 9 hours per day, how far apart will they be at the end of the 17th day ?

54. What is the amount due on the following bill of parcels:—

ALBANY, June 1, 1866.

JOHN BARNES,

Bought of NATHAN HADLEY & CO.,

16 lbs. tea, @ 1.05,	-	-	-	-	\$
18 lbs. sugar, .14,	-	-	-	-	\$
25 lbs. rice, @ .09,	-	-	-	-	\$
15 yds. linen, @ .66,	-	-	-	-	\$
					\$
	CR.				
By balance of account,	-	-	-	-	2.48

Balance due, - - - - \$

Received payment, N. HADLEY & CO.

55. State the process of reducing inches to leagues.

56. How many bushels will a box 8 feet long, 4 feet wide, and 3 feet high contain ?

57. Add 38-67, $\frac{3}{4}$ and 17-101.

58. Reduce 1049-8392 to its lowest terms.

59. Give the rule for reducing fractions having different denominators to equivalent fractions having the least common denominator.

60. Multiply 18 5-9 by 7 4-5.

61. Express in figures, forty-seven, and twenty-one hundred thousandths.

(2:30-4:30 P. M.)

62. Divide 2019.86928 by 30 1-250.

63. If 9 men cut 150 acres of grass in 18 days, how many will do the same work in 27 days ?

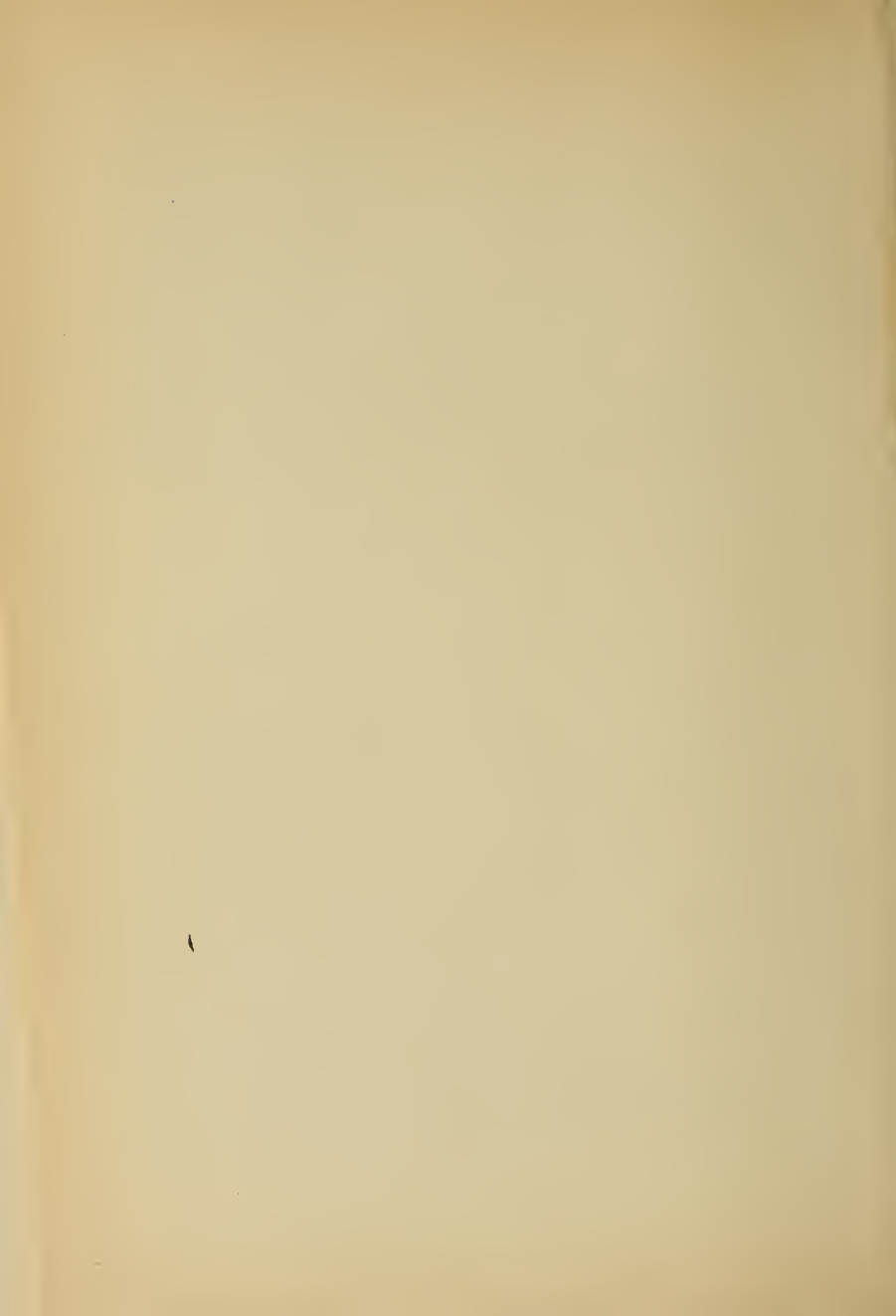
64. If 500 copies of a book containing 210 pages require 12 reams of paper, how much will 1200 copies of a book of 280 pages require ?

65. What is the value in currency of \$865 in gold, when the latter is selling at 131 per cent ?
66. What is the interest on \$200 for 3 years and 10 months, at 7 per cent ?
67. In what time will a sum of money double itself at an annual interest of 5 per cent ?
68. What is the face of a note at 30 days, which yields \$500 when discounted at bank, at 7 per cent ?
70. Extract the square root of .0043046721.
71. Involve 1.06 to the 4th power.
72. What debt can be discharged in a year by weekly payments in arithmetical progression, the first being \$24, and the last \$1,224 ?
-

Examination IV. Nov. 8, 1867.

(10:00 A. M.—12:00 M.)

73. Express in words 2584503962047.
74. 2468 plus 13579 plus 100 plus 6042 plus 187 plus 19 equals how many ?
75. What is the difference between 576—208 plus 1645—321, and 403—256 plus 814—195 ?
76. Multiply forty-nine millions forty thousand six hundred and ninety-seven by nine millions forty thousand seven hundred and nine.
77. One factor of a certain number is 11, and the other 3703311605: what is that number ?
78. If the remainder is 17, the quotient 610, and the dividend 45767, what is the divisor ?
79. What cost 3a. 2R. 20rd. of land, at 43 per acre ?
80. What is the difference of time between July 15, 1857, and April 25, 1862 ?



	T.	cwt.	qr.	lb.	oz.	dr.
81. Add	14	13	2	15	15	15
	13	17	3	13	11	13
	46	16	3	11	13	10
	14	15	2	7	6	9
	11	17	3	10	15	11

82. Find the greatest common divisor of 492, 744 and 1044.

83. Divide 137 lb. 9 oz. 18 pwt. 22 gr. by 23.

84. From $\frac{2}{3}$ of 137 subtract $\frac{1}{2}$ of 317.

85. Write eleven thousand, and eleven hundred thousandths, (the whole as a single expression.)

86. Multiply .0097 by .000125.

(2:30-4:30 P. M.)

87. Divide 475 by $128\frac{5}{8}$.

88. What cost 11-13 of an acre at \$1.75 per sq. rod?

89. Divide 9811.0047 by .325947.

90. Reduce 18 s. $3\frac{3}{4}$ d. to the decimal of a £.

91. Find the third term of $7 : 8 :: (?) : 12$.

92. If $2\frac{1}{4}$ yds. of broadcloth cost \$18, what will 27 yds. cost?

93. If 8 men spend \$64 in 13 weeks, what will 12 men spend in 52 weeks?

94. Find the interest on \$35.61 from Nov. 11, 1857, to Dec. 15, 1859, at 6 per cent.

95. What is the bank discount on a note for \$350, payable 3 months after date, at 7 per cent. interest?

96. Find the square root of .876096.

Examination V. Feb. 21, 1868.

(10:00 A. M.-12:00 M.)

97. Add together 15262986957 and 3879; and multiply the 19th part of the sum by 76.

98. Subtract nine hundred and fourteen thousand nine hundred and twenty, from four hundred millions and thirteen thousand

99. A wheel makes 880 revolutions in passing over 2 mi. 1430 yd. : what is its circumference ?

100. Reduce 49 wk. 6 da. 19 hr. to minutes.

101. Find the greatest common divisor of 4004 and 5772.

102. Find the least common multiple of 25, 36, 33, 12, 45.

103. Divide 52 yd. 1 ft. $10\frac{1}{2}$ in. by 3 12-17.

104. Reduce $3\frac{8}{9}$ of $1\frac{7}{32}$ of $2\frac{5}{14}$ to a decimal.

105. Find the value of 169 multiplied by .0000728.

106. Find the value of 25.000315— .0045 plus .2801 minus 18 plus 21.001.

107. Divide the number 54 into 3 parts, proportioned as 2, 3, 4.

108. If for a certain sum, 18 sheep may be grazed 20 days, how many days may 30 sheep be grazed for the same sum ?

109. How many acres could 10 men plow in 14 hours, if 5 men plough 6 acres in $10\frac{1}{2}$ hours ?

110. Standard silver is composed of 37 parts of pure silver, and 3 parts of copper : how much per cent. of the whole is each of the components ?

(2:30-4:30 P. M.)

111. If I buy cloth at \$1.20 per yard, how must I sell it so as to gain 25 per cent ?

112. Divide \$1,200 between A and B so that A's share may be to B's as 2 to 7.

113. Divide 6s. 6d. between Jane and Ellen, so that Jane may receive 3s. more than Ellen.

114. What is the value of the square root of $42 \times 24 \times 28$?

115. How much coffee at 9, 11 and 14 cents a pound, will form a mixture worth 12 cents a pound ?

116. When the extremes and the number of terms in an arithmetical series are given, how is the sum of the series ascertained?

117. The surface of a square table is 26 sq. ft. 100 in. ; find the length of each side.

118. How many square yards of matting would cover a floor the dimensions of which are 20 ft. 10 in. by 15 ft. 5 1-7 in.?

119. What sum of money will in 3 years, 10 months and 9 days at 7 per cent. amount to \$1524.10?

120. I have 3 notes payable as follows: one for \$200, due Jan. 1, 1869; another for \$350, due Sept. 1, 1869; and another for \$500, due April 1, 1870: what is the average of maturity?

Examination VI. June 5, 1868.

(10:00 A. M.-12:00 M.)

121. Express in figures the number represented by four units of the tenth order, six of the eighth, four of the seventh, two of the sixth, one of the third, and five of the second.

122. Numerate the expression obtained as the answer to question No. 121.

123. How may 25,000 be expressed in Roman numerals?

124. How is the *local* value of a figure determined, or upon what does it depend?

125. What is the sum of the composite numbers from 50 to 80 inclusive?

126. From sixty-five trillions three millions six hundred and twelve, take nine billions one million four thousand and six.

127. A tax of thirty millions fifty-six thousand four hundred and sixty-five dollars is assessed equally on four thousand and ninety-seven towns: what sum must each town pay?

128. Which of the fundamental rules is employed in reducing a denominate fraction to integers of lower denominations?

129. How many cubic inches does the standard unit of liquid measure contain?

130. How many cords of wood in a pile 140 feet long, $4\frac{1}{2}$ ft. wide, and $6\frac{1}{2}$ ft. high?

131. A stationer bought one great gross of slates at 9 pence each: what was the whole cost, in pounds sterling?

132. Of what factors of two or more numbers does their greatest common divisor consist?

133. What is the smallest sum of money with which horses can be bought at \$50 each, cows at \$30 each, or sheep at \$8 each, using the same amount in each case?

134. Express in words 0 500072.

(2:30-4:30 P. M.)

135. What number must be multiplied by $15\frac{3}{8}$ that the product may be $56\frac{1}{2}$?

136. How is the value of a fraction affected when its denominator is divided by a number greater than unity?

137. How do you multiply .061 by 100,000?

138. What amount is due on the following items?

37 chests green tea	at \$ 23 75 each.	
42 " black "	" 17 50 "	
12 crates Liverpool ware	" 175 00 "	
19 bbls. Genesee flour	" 15 50 "	
23 bu. rye	" 1 52 "	
	————— \$	(?)

139. When are four quantities said to be in proportion?

140. If $\frac{4}{9}$ of the distance from A to B is 32 miles, what is $\frac{5}{12}$ of the same distance?

141. How is the rate per cent. ascertained when the *principal*, *interest* and *time* are given?

142. If \$300 gain \$18 in 9 months, what is the per cent?

143. What is the length, in feet and inches, of each side

of a square carpet, made from $49\frac{1}{2}$ yds. of Brussels carpeting, $\frac{3}{4}$ yd. wide?

144. How is the *last term* of a geometrical series found, the *first term*, *ratio*, and *number of terms* being given?

Examination VII. Nov. 13, 1868.

(10:00 A. M.—12:00 M.)

145. Express in figures six hundred millions, seventeen thousand, three hundred and eight.

146. What is the sum of 372856, 404932, 2704793, 9078961, 304165.207708, 41274, 375, 271, 34 and 6.

147. From sixty-five billions three millions, six hundred and twelve, take nine billions, one million, four thousand and six.

148. One factor of a certain number is 11, and the other 3708311605: what is that number?

149. What are the prime factors of 800?

150. If the quotient is 482 and the divisor 281, what is the dividend?

151. If I take 13729 from the sum of 8762 and 14967, divide the remainder by 50, and multiply the quotient by 19, what is the product?

152. How many miles in 60750 links?

153. What is the sum of $4\text{-}25$ of $9\text{-}3\text{-}5$, and $4\text{-}21$ of $328\text{-}2\text{-}5$?

154. Reduce $5\text{-}7$ of $14\text{-}25$ of $6\text{-}1\text{-}5$ of 17 to a simple fraction.

155. How many times is $5\text{-}9$ contained in 837?

156. Reduce $9\text{-}25$ of an acre to lower denominations.

157. Find the greatest common divisor of 492, 744, 906.

158. What is the least common multiple (or dividend) of the nine digits?

(2:30—4:30 P. M.)

159. Divide 0.01764144 by 0.0018.

160. Reduce 7 fur. 29 rds. to the decimal of a mile.

161. What sum, at 7 per cent., will amount to \$231,075 in 3 years 4 months ?

162. What is the amount of \$1200 for 2 years at 6 per cent. compound interest, payable quarterly ?

163. If \$100 gain \$6 in one year, what principal will gain \$12 in 8 months ?

164. To what number has $\frac{1}{2}$ the same ratio as exists between 3 and 21 ?

165. What number of men will be required to perform a piece of work in 8 days, that would take 15 men 24 days.

166. A and B enter into partnership. A furnishes \$240 for 8 months ; and B \$560 for 5 months. They lost \$118. How much did each man lose ?

167. What is the square root of 61723020.96 ?

168. How many cubic quarter-inches are contained in a cubic inch ?

Examination VIII. Feb. 19, 1869.

(10:00 A. M.-12:00 M.)

169. Add the following numbers: One hundred and eight billions, three hundred and six ; twenty-one billions, twenty thousands, two hundred and ten ; thirty billions, twenty-nine millions and three.

170. Reduce 2579792 drams avoirdupois to higher denominations.

171. Reduce 1 m. 18 rd. 2 yd. 1 ft. to inches.

172. Multiply $\frac{2}{3}$ of 12-7 by $3\frac{1}{2} \div 16$.

173. Divide 3-12 of 18-21 by 6-7.

174. Find the least common multiple of all the even numbers from 1 to 15.

175. From the sum of $\frac{2}{3}$ and 4-9 take 5-18.

176. Add together 1-4032 hhd. and 2-7 gill.

177. Multiply 30.6002 by two and one-ten thousandth.

178. Divide 4.08 by .000136.

179. Reduce 378-135 to a decimal.
 180. Reduce 8 oz. 5 pwt. 3 gr. to the decimal of a lb.
 181. If 21 men in 12 days can do certain work, how many men in 7 days could do $\frac{2}{3}$ as much?
 182. How much will it cost to dig a cellar 40 feet long, 32 feet wide, and 5 feet deep, at \$0.25 a cubic yard?

(2:30-4:30 P. M.)

183. A begins business with \$500; at the end of two months B puts in \$300; at the end of one month more C puts in \$600; at the end of 5 months more the profits amount to \$1056. What was each man's share?

184. 3 pence is what per cent. of 4 shillings?

185. What sum in one year will yield \$48.75 at $12\frac{1}{2}$ per cent?

186. What is the bank discount on a note for \$600 for 2 months and 9 days, at 10 per cent. per annum?

187. I sell goods for \$511.29, and gain $9\frac{1}{4}$ per cent.; what did the goods cost me?

188. At what rate will \$500 yield \$34 interest in 1 year 1 month and 18 days?

189. What is the compound interest of \$200 for 3 years at 7 per cent?

190. How much gold will \$100 currency buy, gold being at 147?

191. What is the square root of 403.6081?

192. What is the cube root of 1061208-64000?

Examination IX. June 11, 1869.

(10:00 A. M.-12:00 M.)

193. The factors of a number are three hundred ninety-seven thousand five hundred, and nine thousand eight hundred. What is the product expressed in words?

194. If one man can mow 1.875 acres in a day, how many acres can 13 men mow in 7.5 days?

195. How many reams of commercial note paper, each 8 in. long, 5 in. wide, and 3.5 in. thick, can be packed in a box the inside dimensions of which are 4, $1\frac{2}{8}$, and 7-12 feet respectively?

196. A note given May 10, 1867, was paid August 10, 1868. How long did the note run?

196a. How long is a field containing 14 A., if it is 35 rds. wide?

197. If I start from latitude 15 deg. 35 min. 40 sec. north, and travel due north 2159 geographic miles, in what latitude shall I then be?

198. How many seconds in the circumference of a circle?

199. Is 217 a prime or a composite number?

200. The four sides of my garden are 168 ft., 280 ft., 182 ft., and 252 feet respectively: what is the greatest length of boards that I can use in fencing it, without cutting any of them?

201. What is the smallest sum of money for which a person can purchase oxen at \$85 each, or cows at \$35 each?

202. The tide rose 5-6 ft. one hour, 13-18 ft. the next, and $\frac{3}{4}$ ft. the third hour: how much did it rise in the three hours?

203. How many square rods are there in a lot 15 4-9 rd. long and 12 6-7 rd. wide?

204. If $8\frac{2}{8}$ qts. of strawberries cost \$39.50, what is the price per quart?

205. The product of three factors is $19\frac{1}{2}$, and two of them are 1 4-9 and $2\frac{5}{8}$: what is the other?

206. Reduce 4 da. 4 h. 48 mi. to the decimal of a week.

(2:30-4:30 P. M.)

207. If 5 tons of coal are equal to 9 cords of wood for fuel, and a family burns 31.5 cords of wood in a year, how much will they save by changing from wood to

coal, when wood is worth \$4.25 per cord, and coal \$6.80 per ton?

208. When it is 12 o'clock M. at St. Paul, 93 deg. 10 min. W. Longitude, what is the time at Richmond, 77 deg. 27 min. W.?

209. Reduce .06875 to the form of a common fraction and to its lowest terms.

210. 24 is $\frac{2}{5}$ per cent of what number?

211. What will \$25,390 amount to in 7 mo., at 10 per cent?

212. When gold is worth 124, what amount of currency can be bought for \$5,400 in gold?

213. A's property is assessed at \$6,750, and B's at \$13,575. A's tax is \$52.65: how much is B's?

Find the unknown term in the following proportions:

214. $7\frac{1}{2} : 6\frac{1}{4} :: \text{---} : 5$

215. $\begin{matrix} 7 & : & 21 \\ 4 & : & 8 \end{matrix} \left\{ \begin{matrix} : & : & 3 \\ : & : & \text{---} \end{matrix} \right.$

216. What is the square root of 1127750724?

Examination X. Nov. 11, 1869.

(10:00 A. M.—12:00 M.)

Add in figures, LXVI, MDXIX, CCIV, XVIII.

218. From sixty-eight million nine hundred thousand and six, take seven million two hundred thousand and two.

219. Six hundred and four is one factor, ninety-six thousand and seventy-three is the other: what is the product?

220. Which term in division corresponds with the product in multiplication?

221. Give the method of proving division.

222. Resolve 7498 into its prime factors.
223. Find the greatest common divisor of 505, 707, and 4343.
224. Of what is the least common multiple of several numbers the product?
225. Find the smallest number that exactly contains 78, 156 and 390.
226. Express in words 40203-706007.
227. Reduce 387 to eighty-fifths.
228. What is the cost of four fields, containing respectively 4 1-9, $2\frac{1}{2}$, $3\frac{3}{8}$ and 1 13-18 acres, at \$25 an acre?
229. What is the rate per hour of a boat that goes 230 19-20 miles in 18 3-5 hours?
230. Write as a decimal, 3241-1009000.

(Nov. 12, 2-00—4:00 P. M.)

231. Required the area in acres, etc., of a piece of land .5 of a mile long and .3 of a mile broad.
232. From 1 lb. Troy, take 10 oz. 17 pwt. 18 gr.
233. Sold 517 bbls. of flour for \$8.10 per bbl., at a profit of 8 per cent. What was the whole cost?
234. 1 rd. : $\frac{1}{2}$ ft. : : ? : \$0.50.
235. $(2-5)^{\leftarrow} = ?$
236. What is the square root of .0011943936?
237. What is the amount of \$50, at compound interest for 3 years, at 8 per cent., interest payable half-yearly?
238. A note for \$486, dated Sept. 7, 1863, was endorsed as follows: Received, March 22, 1864, \$125. Nov. 29, 1864, \$150. May 13, 1865, \$120. What was the balance due April 19, 1866, the rate being 6 per cent?
239. What are the proceeds of a note for \$426.10, payable in 57 days, with interest at 6 per cent., discounted at bank for 6 per cent?
240. If \$400, at 7 per cent., in 9 mo., produce \$21 interest, what will be the interest on \$360, for 8 mo., at 6 per cent?

Examination XI. Feb. 17, 1870.

(10:00 A. M.-12:00 M.)

241. Multiply twenty-nine millions two thousand nine hundred and nine, by four hundred and four thousand.

242. Divide 478656785178 by 56789.

243. Prove that your solution of the last example is correct.

244. A gem weighing 2 oz. 18 pwt. 12 gr. was sold for \$1.37 per grain : what was the sum paid?

245. Venus is at a certain time 3 S. 18 deg. 45 min. 15 sec. east of the sun ; Mars, 7 S. 15 deg. 36 min. 18 sec. east of Venus ; Jupiter, 5 S. 21 deg. 38 min. 27 sec. east of Mars : how far is Jupiter east of the sun ?

246. What is the least common multiple (or dividend) of 3, 4, 5, 6, 7 and 8 ?

247. What is $\frac{7}{8}$ of 9-11 of $\frac{3}{8}$ of 4-7, expressed in lowest terms ?

248. Add 1-9 of $\frac{2}{3}$ to 1-5 of 7-10.

249. Divide 81 1-7 by 9 1-5.

250. What is the greatest common divisor of $\frac{3}{4}$, 5-6, and 1 1-8 ?

251. Multiply eighty-seven thousandths by fifteen millionths.

252. What decimal fraction is equivalent to 7-16 ?

253. Reduce 6 fur. 8 rd. to the decimal of a mile.

254. What is the value of .815625 of a pound Troy expressed in oz. pwt. and gr. ?

(Feb. 18, 2:00-4:00 P. M.)

255. If \$800 gain \$32 in 8 mo., what is the rate per cent ?

256. If a man travels 117 miles in 15 days, employing only 9 hours a day, how far would he go in 20 days, travelling 12 hours a day ?

257. What is the square root of 9754.60423716 ?

258. If the extremes are 11 and 74, and the common difference 7, what is the sum of the series?

259. A man having \$10,000, lost 15 per cent. of it; what sum had he left?

260. What is the interest of \$850 for 1 yr. 7 mo. 18 da., at 7 per cent?

261. How long must \$165 be on interest at 6 per cent. to gain \$14.85?

262. What is the present worth of \$477.71, due 4 years hence, discounted at 6 per cent?

263. What is the present worth of a note for \$875.35, payable in 7 mo. and 15 da., discounted at bank at 7 per cent?

264. If 29 lb. of butter will purchase 40 lb. of cheese, how many pounds of butter will buy 79 lb. of cheese?

Examination XII. June 9, 1870.

(10:00 A. M.—12:00 M.)

265. Numerate, read or express in words 8096392702.

266. Find the sum of $\left\{ \begin{array}{r} 91784 \\ 794380 \\ 400084 \\ 5631 \\ 79840 \\ 957001 \\ 849987 \\ 451786 \\ 4670 \\ 501 \end{array} \right\}$

267. $2579584239456 - 249187654116 = ?$

268. Multiply four hundred and sixty-two thousand six hundred and nine, by itself.

269. Divide 1521808704 by 6503456.

270. If the remainder is 17, the quotient 610, and the dividend 45767, what is the divisor?

271. Resolve 7498 into its prime factors.

272. Find the greatest common divisor of 285 and 465.

273. What is the least common multiple, or dividend, of 16, 40, 96, and 105?

274. In 4 da. 4 hr. 45 min., how many seconds?

275. Reduce $\frac{1}{2}$, $\frac{1}{8}$, $\frac{1}{4}$, 1-5, 1-6, 1-7, 1-8, 1-9, to equivalent fractions having the least common denominator.

276. Reduce 4 oz. 6 pwt. 9 3-5 gr. to the fraction of a pound.

277. How many sq. ft. in the four side walls of a room 16½ ft. long, 15 ft. wide, and 9 ft. high?

278. The product of three numbers is 6·7; two of the numbers are $2\frac{1}{2}$ and 7·9: what is the third?

(June 10, 2:00-4:00 P. M.)

279. Add together 423 ten millionths, 63 thousandths, 25 hundredths, 4 tenths, and 56 ten thousandths.

280. What cost 5 T. 17 cwt. 20 lb. of hay, at \$30.50 per ton?

281. Reduce 10 oz. 13 pwt. 9 gr. to the decimal of a pound Troy.

282. Divide 0.01654144 by 0.0018,

283. One acre of corn yields 80 bushels and another acre 20 per cent. more; how many bushels does the second acre yield?

284. What is the amount of \$794 for 4 years and 4 months, at 7 per cent?

285. What is the bank discount of \$600 for 3 months at 6 per cent?

286. If 3-16 of a ship cost £273 2s. 6d., what will 5-32 cost?

287. If \$200 gain \$12 in one year, what will \$400 gain in 9 months?

288. Find the square root of 4 21-25.

Examination XIII. Nov. 11, 1870.

(10:00 A. M.-12:00 M.)

289. Write in figures each of the following numbers, add them, and express in words (or numerate) their sum: fifty-six thousand, and fourteen thousandths; nineteen, and nineteen hundredths; fifty-seven, and forty-eight ten thousandths; twenty-three thousand five, and four-tenths; and fourteenth millionths.

290. What is the difference between $3\frac{3}{4}$ plus $7\frac{5}{8}$, and 4 plus $2\frac{3}{4}$?

291. In multiplying by more than one figure, where is the first figure in each partial product written, and why is it so written?

292. If the divisor is 19, the quotient 37, and the remainder 11, what is the dividend?

293. What is the quotient of 65 bu. 1 pk. 3 qt. divided by 12?

294. Which one of the fundamental operations (or ground rules) of arithmetic is employed in reduction ascending?

295. In exchanging gold dust for cotton, by what weight would each be weighed?

296. Which is the largest prime number below 100?

297. How many weeks in 8568456 minutes?

298. To what *term* in division does the *value* of a common fraction correspond?

299. What is the product of a fraction multiplied by its denominator? Give an example.

300. What is the rule for the multiplication of decimals?

301. How is a common fraction reduced to the decimal form? Give an example.

302. What is *ratio* and how may it be expressed? Illustrate by one or more examples.

(Nov. 12, 2:00-4:00 P. M.)

303. If 27 T. 3 qr. 15 lb. of coal cost \$217.83, what will 119 T. 1 qr. 10 lb. cost?

304. Find the cost of the several articles, and the amount of the following bill:

ALBANY, October 1, 1870.

A. P. JEWETT to SAMUEL PALMER, Dr.

To 16750 feet of boards at \$12.50 per M.,	-
" 1750 " " 24.00	" -
" 3500 " " 25.00	" -

Received payment, \$
SAMUEL PALMER.

305. What is the length of the side of a cubical box which contains 389017 solid inches?

306. What is the present worth of the following note discounted at bank, and when will it become due :

\$100. UTICA, October 11, 1870.

Ninety days from date, for value received, I promise to pay to the order of John Smith, one hundred dollars, at the Albany City National Bank.

JOHN BROWN.

307. Involve $\frac{5}{8}$ to the 7th power.

308. What is the square root of .0043046721 ?

309. Sold 9 1-6 cwt. of sugar at $\$8\frac{1}{4}$ per cwt., and thereby lost 12 per cent. : how much was the whole cost ?

310. A person owned $\frac{5}{8}$ of a mine and sold $\frac{3}{4}$ of his interest for \$1710 : what was the value of the entire mine ?

311. When it is 2 h. 36 m. A. M. at the Cape of Good Hope, in longitude $18^{\circ} 24'$ east, what is the time at Cape Horn, in longitude $67^{\circ} 21'$ west ?

312. What is the cost of 17 T. 18 cwt. 1 qr. 17 lb. of potash at \$53.80 per ton ?

Examination XIV. Feb. 23, 1871.

(10:00 A. M.—12:00 M.)

313. Express in words the number 42567000129301.

314. Multiply five hundred and forty thousand six hundred and nine by seventeen hundred and fifty.

315. Give the rule for reduction descending.

316. How many steps of two and one-half feet each, would a man take in walking a mile ?

317. How is a whole number reduced to a fraction of the same value having a given denominator ?

318. What is the value of $\frac{2}{3}$ of $\frac{2}{3}$ of $\frac{1}{4}$ of $\frac{1}{2}$ when reduced to a simple fraction of the lowest terms?

319. Give the rule for reducing several fractions to equivalent fractions having the least common denominator.

320. Add $3\frac{2}{3}$ to 4 21-38.

321. Write in figures, two and six hundred-millionths.

322. Reduce 7-625 to the equivalent decimal form.

323. Multiply seven thousand and five, by three-hundred-and-five millionths.

324. Divide .5 of 1.75 by .25 of $17\frac{1}{2}$.

325. The ratio of two numbers is 9, and the antecedent 90: what is the consequent?

326. Find the value of the omitted term in the following proportion:

$$\$4 : (?) : : 9 : 16.$$

(Feb. 24, 2:00-4:00 P. M.)

327. If 56 lb. of butter cost \$15.68, what will .078 of a ton cost?

328. If 96 horses eat 192 tons of hay in one winter, how many tons will 150 horses eat in 6 winters?

329. In 1 yr. 4 mo., \$311.50 amounted to \$336.42 at simple interest: what was the rate per cent.?

330. What is the interest of \$14231.50 from June 15, 1865, to April 30, 1870, at 8 per cent.?

331. What is the value of a pile of wood 34 ft. long, 3 ft. wide and $5\frac{1}{2}$ ft. high, at \$7.88 per cord?

332. How much will it cost to carpet a parlor 18 feet square, with carpeting $\frac{3}{4}$ yd. wide, at \$1.50 per yard?

333. The difference in the local time of two places is 2h. 18m.: what is the difference in longitude?

334. 33 is $2\frac{3}{4}$ per cent. of what number?

335. What is the length in rods of each side of a square field which contains 66 A. 1 R. 9 sq. rd.?

336. A note for \$470.66 drawn at 60 days, is discounted at bank at 6 per cent: what are the proceeds?

Examination XV. June 8, 1871.

(10:00 A. M.—12:00 M.)

- | | |
|-------------------|----------------------------|
| (1) 70100.3042875 | (6) 10257235 $\frac{1}{2}$ |
| (2) 20514471 | (7) 1282154.4375 |
| (3) 641077.21875 | (8) 90169.0004 |
| (4) 2564308.875 | (9) 5128617.75 |
| (5) 320538.609375 | (10) 160269.3046875 |

337. Arrange the above numbers as required for addition, and find their sum.

338. What special name or names are given to the period (.), as an arithmetical sign; and what is its use in arithmetic?

339. What two denominations of currency are separated and distinguished from each other by the sign referred to in question 338?

340. Mention two or more arithmetical processes or rules in which "pointing off into periods" is required.

341. Copy the number marked (1); then point it off into periods and numerate it.

342. What arithmetical operation would change the value of (5) to 32.0538609375?

343. Subtract the number (1) from the number (6).

344. Multiply (7) by (8).

345. Divide (6) by (3) and indicate, by the use of the proper arithmetical sign, whether the quotient is an integral, fractional or mixed number.

346. Change the decimal part of (8) to the form of a common (or vulgar) fraction, and then reduce it to its lowest terms.

347. Find the prime factors of the integral part of (1).

348. Regarding (2) as so many square inches, how many square acres, rods, rods, feet and inches would be the equivalent of this expression?

349. Regarding the fractional part of (4) as the decimal of a pound avoirdupois, to how many ounces would it be equivalent?

350. Represent the first four figures of (¹⁰) by the Roman notation.

(June 9, 2:00-4:00 P. M.)

351. Copy the following bill of items, find the cost of each item, insert it in its proper place on the right, and find the total amount:

ALBANY, May 30, 1871.

Mr. J. B. WOODWORTH,

To A. & E. C. KOONZ, Dr.

To 75 yds. carpeting, @ \$2.50.....	\$
“ 42 “ drugget, @ \$1.87½.....	
“ 6 mats, @ \$3.25.....	
“ 18 rugs, @ \$22.30.....	
“ 81 yds. oilcloth, @ \$1.10.....	

\$

Received Payment,

A. & E. C. KOONZ.

352. Suppose that you buy of D. Appleton & Co., of New York, 5 reams of note paper, at \$3.25 per ream; 4,500 envelopes, at \$4.75 per M.; 24 boxes of steel pens, at \$1.12½ per box; 6 French dictionaries, at \$1.50 each; and 3 photographic albums, at \$5.75 each. Make out the bill in regular form, as in Q. 351.

353. Suppose further that the Messrs. Appleton consent to discount 12 per cent. from the amount of the foregoing items: how much would the required payment become?

354. Analyze (or explain in words the method of solving) the following example: If 6 men can do a piece of work in 10 days, how long will it take 5 men to do it?

355. Define Ratio.

356. Define Proportion.

357. Define Rule of Three.

358. Solve the following example by the Rule of Three (or proportion): If a railroad car goes 17 miles in 45 minutes, how far will it go in 5 hours at the same rate?

359. J. Ayers has D. Howe's note for \$1,728, dated Dec. 29, 1869: what will be the amount Oct. 9, 1872, at 9 per cent? *

360. What principal will gain \$5.11, in 3 years and 6 months, at 8 per cent?

Examination XVI. Nov. 9, 1871.

(10:00 A. M.—12:00 M.)

361. Express by figures the number: five trillions eighty billions nine millions and one.

362. Add the following numbers:

- (1) Two hundred and ten thousand four hundred;
- (2) One hundred thousand five hundred and ten;
- (3) Ninety thousand six hundred and eleven;
- (4) Forty-two hundred and twenty-five;
- (5) Eight hundred and ten.

363. The first number (1) in Q. 362, being taken as a minuend, and the second number (2) in the same question as a remainder, what will the subtrahend be, *expressed in words*?

364. What is the *product* of the numbers (3) and (4) in Q. 362?

365. The quotient of one number divided by another is 37; the divisor, 246; the remainder, 230; what is the dividend?

366. What is the greatest common divisor of 1649 and 5423?

367. What is the least common multiple (or dividend) of 21, 35, and 42?

368. What is the value of $6\frac{2}{9}$ divided by $8\frac{3}{8}$?

369. How many yards of cloth $4\frac{1}{5}$ of a yard wide are equivalent to 12 yards $\frac{3}{4}$ of a yard wide?

370. Change $4\frac{1}{7}$ to an equivalent fraction having 91 for its denominator.

371. The difference between 6-7 and 7-8 of a number is 10: what is that number?

372. What is the sum of $\frac{7}{8}$, 17-12, 105-6, and 5?

373. What will 4868 bricks cost, at \$4.75 per M.?

374. An open court contains 40 square yards: how many stones, 9 inches square, will be required to pave it?

(Nov. 10, 2:00-4:00 P. M.)

375. Change .0008 to a common fraction,

376. Change 3-800 to a decimal.

377. How many cords of wood could be piled in a shed 50 ft. long, 25 ft. wide and 10 ft. high?

378. How many acres of city land at \$2 per square foot, could be bought for a half million dollars?

379. Change 10 oz. 13 pwt. 9 gr. to the decimal of a pound Troy.

380. A man owning 4-5 of an iron foundry, sold 35 per cent. of his share: what part did he still own?

381. What will be the amount, at simple interest, of \$35.61, from Nov. 11, 1869, to Dec. 15, 1871, at 6 per cent.?

382. If the consequent be $\frac{7}{8}$ and the ratio $\frac{3}{4}$, what is the antecedent?

383. At the rate of 9 yards for £5 12s. how many yards of cloth can be bought for £44 16s.?

384. What is the square root of 576.02880036?

Examination XVII. Feb. 27, 1872.

(10:00 A. M.-12:00 M.)

385. Add seven hundred and four; sixty thousand four hundred; five millions eight thousand and sixty; 912875; thirty thousand and forty-nine; seven hundred and seven thousand nine hundred and six



386. A had \$3958, B \$1463; A lost \$1365, B gained \$1165: which then had the most, and how much?

387. A peddler bought 491 yards of cloth at 81 cts. a yard; he used 29 yards, and sold the rest at 95 cts. a yard: how much did he gain?

388. A city had \$311205 at the beginning of the year; the income of the year was \$884743, and the expenses \$896756: what was the balance on hand at the end of the year?

389. A man exchanged 159 cords of wood at \$5 a cord, for a horse valued at \$144, and the balance in sheep at \$3 apiece: how many sheep did he receive?

390. How many pieces of muslin, each containing 33 yards, must be sold at 14ct. 5m. a yard to realize \$1339.80?

391. How many sq. yd. of paving in a street are there, 2700ft. long and 40ft. wide?

392. At noon on Thursday, a ship was in north latitude 28 deg. 15 min. 35 sec.; it then sailed north till Saturday afternoon at 3 o'clock, when it was in north latitude 41 deg. 34 min. 35 sec.: what was its average motion per hour, in geographical miles?

393. $\frac{7}{8}$ of 9-10 of 11-12 of 8-9 of 5-6 of 20 4-7 = what?

394. Sold a team for \$183 4-5, losing \$24 $\frac{1}{2}$: for how much should I have sold it to gain \$39 7-10?

395. A man having 105 $\frac{3}{4}$ A. of land, exchanged 1-6 of it for wood, at the rate of 10 $\frac{1}{2}$ C. per A.: how many C. did he receive?

396. Multiply the quotient of 14 2-5 divided by 6 6-7, by the quotient of 5 5-9 divided by 7 7-11.

397. Reduce 9000000 in. to mi.

398. What is the cost of a field 77 rd. long and 41 rd. wide, at \$17.60 an A.?

(Feb. 28, 2:00-4:00 P. M.)

399. If 4.2 yd. of cloth cost \$15, what will 8 yd. 3 qr. cost?

400. If a loaf weighing 12 4-5 oz. is worth 2 cts., when flour is \$4 a bbl., what is the value of a loaf weighing $10\frac{3}{8}$ oz., when flour is \$6 2-5 a bbl. ?

301. A man bought 350 A. of land for \$40 an acre, and sold a part for \$2,240, at the same rate : what per cent. of the land did he sell ?

402. At 6 per cent., what is the interest of \$720 for 3 yrs. 4 mo. 16 da. ?

403. Sold 50 bbls. of wine, each containing 31 gal. 2 qt., at \$2.40 a gal., receiving a note at 90 days without grace : what would be the proceeds of this note, discounted at $7\frac{1}{2}$ per cent. ?

404. A, B and C bought a horse for \$100 and sold him for \$150, by which A. gained \$18 and B \$19 : how much had each paid for the horse ?

405. A man had a yard 38 ft. long and 27 ft. wide : he reserved two grass plats each 8 ft. square, and had the rest paved with stone, at 45 cts. a sq. yd. : what did the paving cost ?

406. The product of two equal factors is 34225 : what is each factor ?

407. Find the sum of 10 terms of the geometric series 3, 6, 12, etc.

408. If January 1 is Sunday, how much can a man earn in the first three months of a leap year, at \$1.25 per day, not working Sundays ?

Examination XVIII. June 6, 1872.

(10:00 A. M.-12:00 M.)

409. If the minuend be 69 trillion and the difference 85 billion, what is the subtrahend ?

410. If 892 is one factor, and 28544 the product, what is the other factor ?



411. Resolve 180 into its prime factors.
412. Find the greatest common divisor of 222 and 564.
413. Reduce 8692 to a fraction whose denominator is 25.
414. What cost $5\frac{1}{8}$ cords of wood at \$7.56 a cord?
415. 5-7 of 10-12 divided by 5-19 of $\frac{1}{8}$ of 2-9 equals what?
416. A body of 4800 troops has 1-5 as many calvary as infantry: what is the number of infantry?
417. 3 6-7 plus 2 5-8 plus 7 8-12 equals what?
418. The product of three numbers is 74 1-5; two of them are 8 1-7 and 6 1-13: what is the third
419. Reduce 2 m. 5 f. 13 r. 4 rd. 2 ft. to inches.
420. What would be the cost of enough oil cloth to cover a room $12 \times 16\frac{1}{2}$ feet, at 75 cts. per sq. yd.?

(June 6, 2:00-4:00 P. M.)

421. At \$198 per lb., what would be the cost of 10 oz. 10 pwt. 10 gr. of gold?
422. What is the difference in time of two places whose longitudes differ 7 degrees, 8 minutes and 4 seconds?
423. Write in figures (the fractional part as *decimal*) the number: seven million and one ten-millionth.
424. 49.2654756 divided by $.0750$ —what?
425. Reduce .8975 of a week, to whole numbers of lower denominations.
426. What is the amount of \$1000, for 7 y. 10 m. 18 d., at 6 per cent. simple interest?
427. What is the present worth of \$1609.30 for 10 m. 24 d., discounted at 5 per cent?
428. For what must apples, which cost \$1.25, be sold to gain 20 per cent?
429. If \$800 yield \$56 interest in a certain time, what will \$390 yield at the same rate?
430. If a 3-cent loaf weigh 2 oz., when flour is \$7.50 per bbl., what should a 12-cent loaf weigh when flour is \$16 per barrel?

431. What number expresses the difference between the square and the cube of 24?

432. What is the square root of 253009?

Examination XIX. Nov. 7, 1872.

(10:00 A. M.-12:00 M.)

433. Write in figures: twenty quintillions, two hundred and seven billions, six hundred millions, six thousand and fifty-nine.

434. Express in words: 224000000600317010.

435. Add 100375, 406780, 4673005, 4112, 18365791, 2478, and 164357.

436. Find the sum (in Roman notation) of LXVI, MDXIX, CCIV, XVIII.

437. The factors of a certain number are 53, 7, 5, and 107: what is that number?

438. 246515999541 divided by 28653 = what?

439. What are the prime factors of 6006?

440. What is the greatest common divisor of 2268 and 344?

441. Find the least com. multiple of the 9 digits.

442. Reduce $\frac{2}{3}$, $4-15$, $\frac{1}{2}$, and $21-7$, to equivalent numbers having the least common denominator.

443. What would be the whole cost of four fields, containing respectively, 4 1-7, $2\frac{1}{2}$, $3\frac{3}{8}$, and 1 13-18 acres, at \$25 an acre?

444. Reduce $3-7 \times \frac{7}{8} \times 5-6 \times 4-11 \times 11-12 \times 6-7 \times 8-9$, to a single fraction of the lowest terms.

(Nov. 8, 2:00-4:00 P. M.)

445. If a man make \$1 17-20 on the sale of one table, how many tables must he sell to make $\$27\frac{3}{4}$?

446. A. Barnes, of Lee, sold B. Brown the following articles : April 1, 1872, 24 yds. black silk, at \$2.25 a yd. ; April 3, 2 pieces calico, 40 yds. each. at 30c. a yd. ; May 2, 4 dress patterns, at \$6.75 a pattern ; May 3, $22\frac{1}{2}$ yds. linen, at \$1.12 a yd. Brown paid \$55 on account. Make out his bill in proper form, showing balance due.

447. At 35 c. per sq. yd., what would it cost to plaster a wall 15 ft. high and 54 ft. long ?

448. How much wood in three piles, the first of which contains 10 cd. 6 cd. ft. 4 cu. ft. ; the second 12 cd. 12 cu. ft. ; the third, 17 cd., 1 cu. ft. ?

449. Divide the sum of five thousand and two thousandths, by two hundredths.

450. \$10 is 12 per cent. of what number ?

451. What is the amount of \$2160 from March 10 to Dec. 1, at 5 per cent ?

452. How much must be invested, at 7 per cent. simple interest, to yield an annual income of \$630 ?

453. A note for \$1800, payable in 60 days, was discounted at bank, at 6 per cent. : how much did the holder receive ?

454. What cost 9 hats, if 5 hats cost £4 5s. ?

455. If the wages of 6 men, for 14 days, are \$126, what, at the same rate, would be the wages of 9 men, for 16 days ?

456. Extract the square root of 6.5536.

Examination XX. Feb. 27, 1873.

(10:00 A. M.-12:00 M.)

457. Write in words the number represented by the figures : 20463162486135.

458. Express in figures: fifty-seven billions fifty-nine millions ninety thousand and forty-seven.

459 Add :

1234	765	89	210	54	678	2109	345	987	102	3000	456	87	109	5432	
------	-----	----	-----	----	-----	------	-----	-----	-----	------	-----	----	-----	------	--

460. From 501505010678 take 794090589.

461. Multiply ninety thousand eight hundred and seven, by nine thousand one hundred and six.

462. 18 A. 0 R. 14 p. equal how many square feet?

463. 31557600 seconds equal how many days?

464. From 61 S. 15 deg. 36 min. 15 sec. take 53 S. 18 deg. 50 min. 18 sec.

465. If 84 loads of hay weigh 201 T. 6 cwt. 0 qr. 12 lb., what will 5 loads weigh?

466. What are the prime factors of 19965?

467. Find the least common multiple of 3, 4, 5, 6, 7, 8.

468. Reduce $5-7 \times 3-15 \times 4-16 \times 8 \frac{3}{4} \times 11-5$ to a simple fraction of the lowest terms.

469. Reduce 4-9, $\frac{2}{3}$, $\frac{1}{5}$, $\frac{1}{4}$, 1-6 and 1-12 to equivalent fractions having the least common denominator.

470. What is the sum of $\frac{3}{4}$, 5-6, $\frac{2}{3}$ and 1-12?

(Feb. 28, 2:00-4:00 P. M.)

471. Divide 116 $\frac{3}{7}$ by 14 $\frac{1}{7}$. (Give the answer as a mixed number, with its fraction of the lowest terms.)

472. Reduce 4-7 of a grain to the fraction of a pound Troy.

473. Paid \$4355.52 for 49 $\frac{6}{7}$ pieces of carpeting: what would 37 $\frac{5}{7}$ pieces cost, at the same rate?

474. Multiply eighty-seven thousandths by fifteen millionths.

475. What decimal fraction is equivalent to $\frac{7}{16}$?

476. What is 5 per cent. of \$789?

477. What is the interest of \$1165.50, for 5 yr. 3 mo. 9 da., at 7 per cent?

478. What is the bank discount on \$780 for 30 days?

479. If A travels 117 miles in 15 days, employing 9 hours a day, how far would he go in 20 days, travelling 12 hours a day (at the same rate per hour)?
480. What is the square root of 23804641?

Examination XXI. June 5, 1873.

(10:00 A. M.—12:00 M.)

481. Write 1873 in Roman characters.
482. What is *Notation*?
483. Write in words: 9008007006.
484. To what number must 962 be added three times to make 8472?
485. $\$9843.621$ plus $\$4687.32$ plus $\$84.321$ plus $\$.07$ plus $\$.64$ plus $\$973.241 = ?$
486. Reduce $53684\frac{11}{100}$ to numbers of higher denominations.
487. Reduce $.8975$ of a week to whole numbers of lower denominations.
488. What cost 10 $\frac{3}{5}$ tons of coal, at $\$7\frac{5}{6}$ a ton?
489. $108 \div 12 - 17 \times 7 - 11 - \frac{2}{8} = ?$
490. Find the least common multiple of 12, 1 and 28.
491. Reduce 13-18, 12-27, and 8 5-6 to the least common denominator.
492. A cubic foot of granite weighs 163 lb. 5 oz. : what is the weight of a block 3 ft. 2 2-5 in. long, 2 ft. 4 in. wide, and 1 ft. 3 in. thick?

(June 6, 2:00—4:00 P. M.)

493. How many linear yards of carpeting $1\frac{1}{2}$ yd. wide will cover a floor 18 ft. square?
494. When snow is uniformly 6 inches deep, how many cubic feet are there on one acre of land?

495. Charles Fuller bought of James Monroe, at West Troy, N. Y., May 4, 1873, 1 horse for \$95, 2 cows at \$50 each, 1 wagon for \$62, 2 shovels at \$1.12 each, and 30 bushels of corn at \$0.65 per bushel, paying cash in full. Make the bill in due form.

496. A cistern can be emptied by 7 pipes of equal capacity in 35 minutes: in what time can it be emptied if only 5 pipes are open?

497. If 12 per cent. of \$97.50 be lost, what amount will remain?

498. What is the simple interest of \$200 for 4 yr. 6 mo. 3 d., at 7 per cent?

499. Find the bank discount of \$1000 for 3 mo., at 7 per cent.

500. If 9 lb. of lead make 150 bullets, how many bullets can be made from 105 lb.?

(Solve by proportion and cancellation.)

501. If the wages of 75 boys for 84 days were \$68.75, how many days could 90 boys be employed at the same rate, for \$41.25? (Solve by double proportion.)

502. What is the difference between the square and the cube of 24?

503. What is the square root of 253009?

504. 1-8 of a number exceeds 1-9 of it by 20: what is that number?

Examination XXII. Nov. 6, 1873.

(10:00 A. M.—12:00 M.)

505. Find the sum of $\frac{3}{4}$ of 9 3-5 and 4-5 of 28 1-6.

506. Find the difference between $3\frac{3}{4}$ plus 7 3-5 and 4 plus 2 3-7.

507. The product of three factors is $19\frac{1}{2}$, and two of them are 4-9 and $\frac{5}{6}$: what is the other?

508. Divide .5 of 1.75 by .25 of $17\frac{1}{2}$.

509. What is the value of $62\text{-}9$ divided by $8\frac{2}{3}$, as a simple fraction?

510. What is the value of $.815625$ of a pound Troy expressed in oz. pwt. and gr.?

511. Reduce 4 da. 4 hr. 48 mi. to the decimal of a wk.

512. A person owned $\frac{5}{8}$ of a mine and sold $\frac{2}{3}$ of his interest for \$1710: find the value of the entire mine.

513. Sold $9\text{-}3\text{-}8$ cwt. of sugar at \$8 per cwt., and thereby lost 20 per cent: what was the whole cost?

514. A man, owning $\frac{4}{5}$ of a bank, sold 35 per cent. of his share: what per cent. of the whole was left?

515. A's property is assessed at \$6,750, and B's at \$13,550. A's tax is \$55.35: how much is B's?

516. How many acres could 10 men plough in 14 hours if 7 men plough 6 acres in $12\frac{1}{2}$ hours?

(Nov. 7, 2:00-4:00 P. M.)

517. What is the simple interest on \$200 for 3 years and 10 months, at 7 per cent?

518. In 1 yr. 4 mo., \$311.50 amounted to \$348.88, at simple interest: what was the rate per cent?

519. What is the amount of \$1000, for 7 yr. 10 mo. 18 da., at 6 per cent. simple interest?

520. What sum, at 9 per cent. simple interest, will amount to \$286.00, in 3 years, 4 months?

521. A note for \$470.66, drawn at 60 days, is discounted at bank at 6 per cent: what are the proceeds?

522. What is the amount of \$50, at compound interest for 3 years, at 8 per cent, interest payable half-yearly?

523. J. Ayers has D. Howe's note for \$1,728 dated Dec. 29, 1869: what was the amount Oct. 9, 1873, at 9 per cent., with interest from date?

524. What is the value in currency of \$865 in gold, when the latter is selling at 107 per cent?

525. How much gold will \$100 currency buy, gold being at 111?

526. Suppose that you buy of D. Appleton & Co., of New York, 5 reams of note paper, at \$3.25 per ream; 4,500 envelopes, at \$4.75 per M.; 24 boxes of steel pens, at \$1.12½ per box; 6 French dictionaries, at \$1.50 each; and 3 photographic albums, at \$5.75 each. Make a bill for D. Appleton & Co., against yourself, in regular form.

527. A man had a yard 38 ft. long and 27 ft. wide; he reserved two grass plats, each 8 ft. square, and had the rest paved with stone, at 45cts. a sq. yd.: what did the paving cost?

528. How much will it cost to dig a cellar 40 feet long, 32 feet wide, and 5 feet deep, at \$0.25 a cubic yard?

Examination XXXIII. Feb. 26, 1874.

(10:00 A. M.—12:00 M.)

529. Find the smallest number which will exactly contain 9, 15, 18 and 20.

530. If 5 be added to each term of the fraction $\frac{5-3}{5}$, by what number will its value be diminished?

531. If .0001 is the dividend, and 1.25 the divisor, what is the quotient?

532. What will 28 sq. yd. 129 sq. ft. of land cost at 12 cts. per square foot?

533. What is the cost of 4565 ft. of joist, at \$23 per M., and 13640 ft. of boards at \$53.55 per M.?

534. If $32\frac{3}{8}$ sq. yds. of carpeting will cover a floor 14 ft. wide, what is the length of the floor?

535. If a load of wood is 8 ft. long and 3 ft. wide, how high must it be to contain a cord?

536. What decimal of a short ton is $\frac{5}{8}$ of an ounce?

537. 20004 plus $(20.104 \times 5.07) - (6.44 \div .0005) = ?$

538. What part of $2\frac{2}{5}$ is $(\frac{3}{4}$ of $\frac{3}{8}$ of $2.5 \div \frac{3}{8})$?

539. Reduce .3945 of a day to lower denominations.

540. An agent received \$67.50 for collecting \$4500: what was the rate per cent. of his commission ?

541. How many cubic ft. in a rectangular beam, 24 ft. 6 in. long, 1 ft. 9 in. wide, and 1 ft. $2\frac{1}{2}$ in. thick ?

(Feb. 27, 2:00-4:00 P. M.)

542. How much shall I gain by borrowing \$3560 for 1 yr. 6 mo. 10 da., at 6 per cent., and lending it at 7 per cent. for the same length of time ?

543. What is the amount of \$1450.40 from April 19, 1872, to August 3, 1873, at 6 per cent ?

544. What is the difference between the greatest common divisor of 30 and 42, and their least common multiple ?

545. A 63-gallon cask is $\frac{3}{5}$ full of wine: if 27.625 gallons should leak out, the wine remaining will be what decimal part of the full cask ?

546. James Riley & Co. bought, July 7, 1873, of Joseph Herr, Trenton, N. J., 15 tons of coal at \$6.50 per ton ; 19 tons of coal at \$8.25 per ton ; and $14\frac{1}{2}$ cords of wood at \$5.20 per cord. Make a bill of the purchase, and receipt it for Joseph Herr.

547. How much must be paid for 41 gal. 2 qt. $1\frac{3}{4}$ pt. of molasses, at 72 cts. a gallon ?

548. If 11-12 of a ton of a hay cost \$18.50, how much will two loads cost, one weighing 5-6 of a ton and the other 13-24 of a ton ?

549. What is the difference between the true and the bank discount of \$300, for 3 mo., at 8 per cent ?

550. What principal on interest at 7 per cent., from April 9, 1871, to Sept. 5, 1873, will amount to \$1477.59 ?

551. The difference between the interest of \$600, and that of \$750, at 5 per cent. for a certain time, is \$18.75. What is the time ?

552. If 18 men can dig a trench 30 yd. long, in 24 da., by working 8 hr. a day, how many men can dig a trench 60 yd. long, in 64 da., working 6 hr. a day ?

Examination XXIV. June 4, 1874.

(10:00 A. M.-12:00 M.)

553. What is the sum of 3912, 400005, $631\frac{3}{8}$, 736863, .000803, 60708010, 44-1000, and 290.68042.

554. Subtract 4-25 of $9\frac{3}{4}$, from 5-21 of 151 1-5.

555. What will 250 miles of telegraph wire cost at 3 cts. per foot?

556. When it is noon at the Cape of Good Hope, in longitude 18 deg. 24 min. east, what is the time at Cape Horn, in longitude 67 deg. 21 min. west?

557. How many cords of wood in a pile 140 ft. long, $4\frac{1}{2}$ ft. wide and $6\frac{1}{2}$ ft. high?

558. Required the area in acres, etc., of a piece of land .5 of a mile long and .3 of a mile broad.

559. How much will it cost to dig a cellar 40 feet long, 32 ft wide, and 5 ft. deep, at \$0.25 a cubic yd.?

560. 1-5 of a qr. is what per cent. of 2-5 of a cwt.?

561. Reduce 7-9 lb. Troy to units of lower denominations.

562. How much gold will \$100 currency buy, gold being at 113?

563. In 1 yr. 4 mo., \$311.50 amounted to \$326.42, at simple interest: what was the rate per cent.?

564. What sum, at 7 per cent. simple interest, will amount to \$221.07, in 3 years 4 months?

565. A note for \$470.66, drawn at 60 days, is discounted at bank at 6 per cent.: what are the proceeds?

566. What is the amount of \$50, for 2 years, at 8 per cent. compound interest, payable half-yearly?

(June 5, 10:00 A. M.-12:00 M.)

567. The four sides of my garden are 168 ft., 230 ft., 182 ft. and 252 ft., respectively. What is the greatest length of boards that I can use in fencing it, without cutting any of them?

568. In the last example, suppose that each board is 8 in. wide and that the fence is 5 boards high: how many sq. ft. of boards will it require to fence the garden?

569. Suppose that you sell to John Clarke, New York, for cash, 75 yards of carpet, \$1.55 per yards; 30 yards drugget, at \$1.30 per yard; 5 mats, at \$3.15 each; and 35 yards oil cloth, at \$1.05 per yard. Make a receipted bill of these articles, in regular form.

570. What is the value of $(2-9x\frac{5}{8} \text{ plus } 3\ 2-7)$ divided by 23-84?

571. What is the least number that 8, 12 and 16 will each divide without remainder?

572. What will 11 lb. 4 oz. of tea cost, if 3 lb. 12 oz. cost \$3.50? (Solve by proportion).

573. If a man travels 107 miles in 15 days, employing only 9 hours a day, how far would he go in 20 days, traveling 12 hours a day, at the same rate per hour?

574. What debt can be discharged in a year by weekly payments in arithmetical progression, the first being \$24, and the last \$1,224?

575. What is the length, in feet and inches, of each side of a square carpet, made from $208\frac{1}{8}$ yds. of Brussels carpeting, $\frac{3}{4}$ yd. wide?

576. What is the length of the side of a cubical box which contains 389017 solid inches?

Examination XXV. Nov. 5, 1874.

(10:00 A. M.-12:00 M.)

577. Find the sum of the following numbers, arranging them properly for addition: 14.2351; 651.012; 2.219; .0374; .00146.

578. Multiply 4.44; 5.555; 6 23; .5.

579. Divide 6.435945 by 4027.5.

580. Find the sum of 16 1-5, 21-25, and 81-35.
581. Find the product of 16-21, $\frac{7}{8}$, 3-17.
582. If $3\frac{3}{4}$ bu. of oats cost $\$2\frac{3}{8}$, what will 2 bu. cost?
583. Resolve 122,850 into its prime factors.
584. Find the greatest common divisor of 195, 285, and 315.
585. Find the least common multiple of 49, 14, 84, 168, and 98.
586. Sold 2462 feet of boards, at \$ 7.25 per 1000.
- | | | | | | | |
|------|---|-------------|---|-------|---|-------|
| 600 | " | scantling, | " | 11.75 | " | 1000. |
| 1012 | " | plank, | " | 1.25 | " | 100. |
| 77 | " | hewn timber | " | .15 | " | foot. |

Write a bill of the same and receipt it. The seller may be John Smith, the buyer James Brown.

587 What part of 7-9 of a mile is $4\frac{3}{4}$ rods, expressed in decimals?

588. The longitude of New York city is 73 deg. 58 min. 54.43 sec. W. ; of Buffalo, 78 deg. 53 min. 25 sec. W. What is the difference of time?

(Nov. 6, 10:00 A. M.-12:00 M)

589. Write the rule for multiplication of decimals.
590. Write the rule for division of decimals.
591. Define *ratio*, state how it may be expressed, what each term is called, and give an example.
592. The same of *proportion*.
593. What is either *extreme* of a proportion equal to? What either *mean*?
594. What is the simple interest on \$2,500 for 1 yr. 8 mo. 12 da., at 7 per cent?
595. A has a note against B, for \$1,728, payable 90 days after date, without interest, which he gets discounted at bank at the rate of 7 per cent. : what does he receive?
596. Extract the square root of 1104601.
597. If a man can do a piece of work in 20 days, working 10 hours a day, how long will it take him to

do the same if he works 12 hours a day? (Solve by proportion.)

598. A farmer puts a flock of sheep in three pastures; in the first he puts $\frac{1}{8}$ of his flock, in the second $\frac{1}{2}$, and in the third 32 sheep. How many has he? Solve by analysis.)

599. Find 12 per cent. of \$1-12.

600. A commission merchant sold 500 pieces of muslin, each piece containing 21 yards, for 23 cents a yard: what is his commission, at $2\frac{1}{2}$ per cent?

Examination XXVI. Feb. 25, 1875.

(10:00 A. M.-12:00 M.)

601. The population of Me. is 627,413; of N. H., 301,471; of Vt., 300,187; of Mass., 1,240,499; of Conn., 410,749; of R. I., 192,815. What is the aggregate population of these States?

602. B had \$12,311; and after paying his debts. and giving away \$2,108, he has \$8,199 left. What was the amount of his debts?

603. How many peaches in an orchard of 14 rows of trees, each row having 27 trees and each tree 108 peaches?

604. How many cheeses, of 45 lbs. each, at 12 cts. per lb., will pay for 15 bbls. of apples, each containing 3 bu., at 84 cts. per bushel?

605. Add 8 8-13, 29-39, and 52-65.

606. What cost $33\frac{1}{2}$ lbs. of tea, at $93\frac{3}{4}$ cts. per lb.?

607. $100 \div 27-30 \div 66\frac{2}{3} = \text{what?}$

608. Write as a decimal, and in words, 18-100000.

609. $6.43875 \div 4027.5 = ?$

610. Anna Lee buys of Eva Cole, for cash, 18 yds. of calico, at $12\frac{1}{2}$ cts. per yd.; 12 yds. muslin, at 17 cts.;

$2\frac{1}{2}$ yds. linen at 74 cts. ; and 9 spools thread, at 7 cts. Make a bill in due form.

611. What decimal part of a mile is 74 rds., 5 yds. ?

612. The circumference of one carriage wheel is 13 ft. 9 in., and that of another 16 ft. 6 in. How many more times will one turn than the other in going 30 miles ?

(Feb. 26, 10:00 A. M.-12:00 M.)

613. What cost 8,824 lbs. of hay, at \$15 per ton ?

614. The *means* and *one extreme* of a proportion being given, how may the *other extreme* be found ?

615. The *extremes* and *one mean* being given, how may the *other mean* be found ?

616. Give an example of No. 614, and solve it.

617. Give an example of No. 615, and solve it.

618. If 20 yds. of cloth $\frac{3}{4}$ of a yd. wide are required for a dress, what must be the width of a piece 12 yds. long, to answer the same purpose ? (Solve by proportion.)

619. If a man can walk 250 mi. in 9 da. of 12 hr. each, how many da. of 10 hr. each would he spend in walking 400 mi. ? (Solve by double proportion.)

620. A boy bought eggs at the rate of 3 for 5 cts., and sold them at the rate of 4 for 7 cts., clearing 9 cents : how many did he buy ? (Solve by analysis.)

621. A commission merchant sold 500 pieces of cloth for \$30 a piece, and paid the owner \$14,700 : what was the rate of his commission ?

622. A store was insured for \$12,000 at the rate of $\frac{3}{4}$ per cent, and the goods for \$15,000, at $1\frac{1}{4}$ per cent : what was the entire premium ?

623. What will be the proceeds of a note for \$1,000, without interest, payable at bank, in 60 days, at 6 per cent ?

624. A man being asked his age, replied, if you add to its half, its third and three times three, the sum will be 130 : what was his age ?

Examination XXVII. June 3, 1875.

(10:00 A. M.—12:00 M.)

625. The quotient is 71, the divisor 42, and the remainder 15: what is the dividend?

626. What will be the cost of 2760 lbs. of hay at \$8.50 a ton?

627. From $17\frac{1}{2}$, take 3-5 of $16\frac{1}{4}$, and multiply the remainder by $\frac{3}{8}$.

628. A lady bought 6 silver spoons, each weighing 3 oz. 3 pwt. 8 gr., at \$2.25 an oz., and a gold chain weighing 14 pwt., at \$1.25 a pwt.: what was the cost of both spoons and chain?

629. From 15 ten-thousandths take 27 millionths, and multiply the difference by 20.5.

630. Reduce 6.25 of a pound Troy to lower integers.

631. How many seconds are there in the three summer months?

632. How many acres are there in a street 4 rods wide and $2\frac{1}{4}$ miles long?

633. Reduce 4s. 6d. to the decimal of a £ sterling.

634. A quantity of sugar was bought for \$150, and sold for \$167.50: what was the gain per cent?

635. Mrs. C. B. Jones bought of Cole, Steel & Co., of Detroit, as follows: Nov. 12, 1874, 23 yds. calico @ 16c.; 45 yds. sheeting @ 20c.; Dec. 7, 12 yds. silk @ $1.62\frac{1}{2}$; 8 handkerchiefs @ 45c.; 2 pairs kid gloves @ $1.87\frac{1}{2}$. Make bill for Jan. 1, 1875, and receipt the same, as clerk of the firm.

636. What is the interest of \$125.50 for 7 months and 10 days, at 7 per cent.?

(June 4, 2:00—4:00 P. M.)

637. A note for \$500, dated Oct. 8, 1873, and bearing interest at 9 per cent., is endorsed as follows: Nov. 4, 1874, \$30; Jan. 30, 1875, \$250. What will be due July 1, 1875?

638. What is the true discount on \$236, due in 3 years, at 6 per cent?

639. What is the bank discount on \$125 payable in 90 days, at 8 per cent?

640. Two men divided a lot of wood costing \$81, one taking $5\frac{1}{2}$ cords and the other the remaining 8 cords: what must each pay? (Solve by analysis.)

641. What is the square root of 416.16?

642. How many gallons of water will a cistern hold which is 7 ft. long, 6 ft. wide, and 11 ft. deep?

643. A. can mow 2 acres in 3 days, and B. 5 acres in 6 days: in how many days can they together mow 9 acres?

644. A house valued at \$3240 is insured for $\frac{2}{3}$ of its value, at $\frac{3}{4}$ per cent.: what is the premium?

645. How many bricks will it require to build a wall 2 rd. long, 6 ft. high, and 18 in. thick, each brick being 8 in. long, 4 in. wide, and $2\frac{1}{2}$ in. thick?

646. If the wages of 24 men for 4 days are \$192, what will be the wages of 36 men for 3 days? (Solve by double proportion and cancellation.)

647. At what rate per cent. will \$311.50 amount to \$337.40, in 1 yr. 4 mo.?

648. What will it cost to lay a pavement 36 ft. long and 9 ft. 6 in. wide, at 40 cts. a sq. yd.?

Examination XXVIII. Nov. 4, 1875.

(10:00 A. M.—12:00 M.)

649. Express in words the number 42567000129301.

650. Multiply five hundred and forty thousand six hundred and nine by seventeen hundred and fifty.

651. Give the rule for reduction ascending (*i. e.* from lower to higher denominations), and state how this process chiefly differs from reduction descending.

652. How many steps of two and one-half feet each, would a man take in walking five miles?

653. How is a whole number reduced to a fraction of the same value, having a given denominator?

654. What is the value of $\frac{3}{8}$ of $\frac{2}{8}$ of $\frac{1}{4}$ of $\frac{1}{2}$, when reduced to a simple fraction of the lowest terms?

655. Give the rule for reducing several fractions to equivalent fractions having the least common denominator.

656. Add $3\frac{2}{3}$, 4 21-38, and 51.652. (Express the fractional part of the sum as a *decimal* of three places.)

657. Write in figures: two and six-hundred-millionths.

658. Reduce 7-625 to the equivalent decimal form.

659. Multiply seven thousand and five, by three-hundred-and-five-millionths.

660. Divide .5 of 1.75 by .25 of $17\frac{1}{2}$.

661. If 27 T. 3 qr. 15 lb. of coal cost \$217.83, what will 119 T. 1 qr. 10 lb. cost? (First reduce qrs. and lbs. to the decimal of a ton; and then solve by proportion.)

662. What is the square root of .0043046721?

(Nov. 5, 10:00 A. M.—12:00 M.)

663. The *ratio* of two numbers and the *consequent* being given, what is the process for finding the *antecedent* (considering it as standing in the same relation to the consequent, as a numerator to its denominator?)

664. Find the value of the omitted term in the following proportion: \$4 : (?) : : 9 : 16.

665. A note for \$486, dated Sept. 7, 1873, was endorsed as follows: Received, March 22, 1874, \$125; May 13, 1875, \$120. What balance remained due at time of last payment, the rate being 6 per cent?

666. What is the length of the side of a cubical box which contains 103823 solid inches?

667. What are the proceeds of the following note discounted at *bank*, and *when will it become due*?

\$100.

UTICA, October 11, 1875.

Ninety days from date, for value received, I promise to pay to the order of John Smith, One Hundred Dollars, at the Albany City Bank.

JOHN JAY.

668. Involve $\frac{5}{8}$ to the 5th power.

669. Sold 9 1-6 cwt. of sugar at $\$8\frac{1}{4}$ per cwt., and thereby lost 12 per cent: what was the first cost?

670. A person owned $\frac{5}{8}$ of a mine and sold $\frac{3}{4}$ of his interest for \$1710: what was the value of the entire mine?

671. When it is 2 h. 36 m. A. M. at the Cape of Good Hope, in longitude 18 degrees 24 minutes east, what is the time at Cape Horn, in longitude 67 degrees 21 minutes west?

672. What is the cost of 17 T. 18 cwt. 1 qr. 17 lb. of potash, at \$53.80 per ton? (First reduce the lower denominations to the decimal of a ton.)

Examination XXIX. Feb. 24, 1876.

(10:00 A. M.—12:00 M.)

673. Two men are 450 miles apart: if they approach each other, one travelling 30 miles a day and the other 35 miles a day, how far apart will they be at the end of 6 days?

674. A had \$24, B four times as much as A less \$16, and C twice as much as A and B together plus \$17: how much money had C?

675. Give all the prime numbers below 20; and all the composite numbers between 20 and 40, inclusive.

676. What is the greatest common divisor of 144, 216 and 648?

677. Reduce to the simplest form: $(20\ 5-9\ \text{plus}\ \frac{1}{8}\ \text{of}\ 5-6)$ divided by $6\frac{1}{2} - \frac{5}{8} \times \frac{2}{3}$.

678. The longitude of New York being 3° E. from the meridian of Washington, San Francisco $45^{\circ} 25'$ W., what will be the time of day at New York, when it is noon at San Francisco ?

679 2 pk. 3 qt. 1.2 pt. is what decimal part of 20 bu. ?

680. What will it cost to dig a cellar 40 ft. long, 21 ft. 6 in. wide, and 4 ft. deep, at \$1.75 a cubic yard ?

681. From 16 ten thousandths take 27 millionths, and multiply the difference by 20.5.

682. Henry Smith bought of John Clarke, of Louisville, Ky., as follows: Dec. 10, 1875, 7 pair calf boots @ \$5.75; 6 pair ladies' gaiters @ \$3.25; 10 pair children's shoes @ \$1.75; Jan. 5, 1876, 12 pair coarse boots @ \$3.12 $\frac{1}{2}$. Make out and receipt the bill, as clerk of John Clarke.

683. A clerk receiving a yearly salary of \$950, pays \$275 a year for board, \$180 for clothing, and \$150 for other expenses: what per cent. of his salary is left ?

684. Carriages costing \$165 are sold at 18 per cent. profit: what is the gain on each carriage ?

685. A school house is insured at 3-5 per cent., and the premium was \$93.60: for how much is the house insured ?

686. If a man's pulse beat 300 times in 4 minutes, how many times will it beat in 8 hours ? (Solve by *proportion*.)

687. If it cost \$84 to carpet a room 36 ft. long and 21 ft. wide, what will it cost to carpet a room 33 ft. long and 27 ft. wide ? (State and solve as a *compound proportion*.)

688. At what date will a note for \$300, given Jan. 10, 1876, amount to \$347.25, at 6 per cent. simple interest ?

689. A note for \$520, dated April 12, 1874, had the following endorsement: "Dec. 6, 1874, \$120." What amount will be due May 1, 1876, at 9 per cent., simple interest ?

690. What is the square root of 1040 1-16 ?

691 A flag pole 180 ft. high casts a shadow 135 ft. in length: what is the distance from the top of the pole to the end of its shadow ?

692. A block of granite in the form of a cube contains 41063.625 cubic inches: what is the length of its edge?

Examination XXX. June 8, 1876.

(10:00 A. M.-12:00 M.)

693. The Erie Railway is 460 miles long, and cost \$65,000 a mile: if \$9,645,635 had been paid, how much would remain unpaid?

694. How many lbs. of butter, at 33 cts. a lb., can be bought for 55 lbs. of tea, at 78 cts. a lb.?

695. What is the sum of twenty-nine and three-tenths, four hundred and sixty-five, and two hundred and twenty-one thousandths? (Give the answer in *figures* and also in *words*.)

696. If I own $\frac{5}{7}$ of a farm, and sell $\frac{2}{3}$ of my share for \$2,300, what is the value of the whole farm at the same rate?

697. Find the factors of .035, and multiply .007853 by these factors.

698. Reduce 15 cwt. 3 qr. $2\frac{1}{2}$ lb. to the decimal of a ton.

699. Reduce 347-2560 to a decimal (of 9 places).

700. The four walls of a room are each 16 ft. in length and 9 ft. in height, and the ceiling is ft. square: how much will it cost to plaster it, at 14 cts. a sq. yd.?

701. A merchant, failing in trade, pays 65 cts. on each dollar owed; he owes A \$2750, and B \$1975: how much does he pay each?

702. Paid \$41.62 $\frac{1}{2}$ for a pile of wood, at the rate of \$3.37 $\frac{1}{2}$ a cord: how much was there in the pile?

703. A steamship, in crossing the Atlantic, has 3,500 miles to go: if she sails 211 mi. 4 fur. 32 rd. a day, what distance, after 15 da., has she still to sail?



(June 9, 10:00 A. M.-12:00 M.)

704. How many sq. ft. are there in a board 17 ft. 6 in. in length, and 1 ft. 7 in. in width?

705. A pasture of a certain extent supplies 30 horses for 28 days: how long will the same pasture supply 21 horses? (Solve by *proportion*.)

706. If 4 bbls. of flour cost $\$34\frac{2}{3}$, how much can be bought for \$182? (Solve by *analysis*.)

707. How much hay will 32 horses eat in 120 days, if 96 horses eat $3\frac{3}{4}$ T. in $7\frac{1}{2}$ weeks? (Solve by *compound proportion*.)

708. What is the simple interest of \$2594.20, for 10 mo. 9 da., at $7\frac{1}{2}$ per cent?

709. What is the compound interest of \$1,250, for 2 yr. 3 mo. 24 da., compounded annually, at 6 per cent?

710. What is the bank discount on a note for \$556.27, payable in 60 days, discounted at 6 per cent?

711. Two merchants enter into partnership. One puts in \$5,000 and the other \$2,000. The partner that puts in the less sum is to receive \$300 extra from the proceeds for his superior knowledge of the business. They gain \$4,725: what is the share of each?

712. What is the 3d power of 8.628?

Examination XXXI. Nov. 9, 1876.

(10:00 A. M.-12:00 M.)

713. How many figures are in each of the periods into which numbers are divided for reading?

714. Name the first four periods of integers, and the first three orders (or places) of decimals.

715. Write in figures the number: One million, one thousand, one hundred and one.

716. Write in figures the numbers: Forty-seven, three hundred and fifty thousandths, forty-two millionths, two hundred and twenty-three billionths.

717. Multiply 732.53 by 37.846.

718. Divide 6052.74 by 4.379.

719. Bought a box of soap containing 70 lbs. Keeping it all summer, it dried away $\frac{1}{8}$, when I sold it at $8\frac{2}{3}$ cts. per pound. I gave 7 cts. per pound. Did I make or lose? How much?

720. If 20 men require $7\frac{1}{2}$ bbls. of flour for their subsistence five months, how much will 30 men require for a year?

721. What is the value of 1-11 of 1-12 of a vessel, if a person who owns 3-11 of it sells 1-9 of $\frac{1}{8}$ of his share for \$1,750?

722. Write the following numbers in the decimal form, and then add them: $6\frac{1}{4}$, $12\frac{1}{2}$, $5\frac{3}{8}$, $6\frac{5}{8}$, 3-5, $\frac{3}{4}$.

723. Multiply 5 da. 15 hr. 13 m. 20 s. by 341.

(Nov. 10, 10:00 A. M.-12:00 M.)

724. Allowing a person to perform a certain journey in $13\frac{1}{2}$ days, by travelling 10 hours a day, in what time ought he to perform the journey if he travel $11\frac{1}{4}$ hours per day?

725. What is the cost of a load of hay weighing 1,875 lbs., at \$12.50 per ton (2000 lbs.)?

726. What ought eggs to be per pound, when they are selling at $18\frac{3}{4}$ cts. per dozen, if they average $9\frac{1}{2}$ eggs to a pound?

727. How many cords in three piles of four ft. wood, the first 36 ft. long and 4 ft. high, the second 42 ft. long and 5 ft. high, and the third 20 ft. long and 6 ft. high?

728. What would it cost to enclose a square lot containing 160 acres, with a fence costing at the rate of \$4 per rod?

729. A note of \$65.80, dated Feb. 20, 1868, and bearing

interest at 7 per cent, was paid June 25, 1870: what was the amount paid?

730. What is the amount of \$152 at semi-annual compound interest for 2 years, at 6 per cent. per annum?

731. What is the annual premium on a policy which insures a house worth \$12,000 for 5-6 its value, at $\frac{1}{2}$ per cent?

732. Amount \$102.81, on \$74.50, at 10 per cent. What is the time?

Examination XXXII. March 1, 1877.

(10:00 A. M.-12:00 M.)

733. Name the first six periods in numeration.

734. Express in figures: one trillion six thousand.

735. 1 million 400 thousand and 50 plus 15 hundred plus 25 thousand plus 120 thousand 6 hundred and 14=?

736. The subtrahend is 2603.46, and the remainder is 72.804: what is the minuend?

737. The factors of a number are 7300.96 and 5.006: what is the number?

738. The dividend is 39314.76, and the quotient is 7,071: what is the divisor?

739. What operations may be performed on the terms of a fraction without altering its value?

740. If the numerator be equal to the denominator, what is the value of the fraction?

741. How does multiplying the numerator affect the value?

742. How, multiplying the denominator?

743. Change $12\frac{1}{4}$ to an improper fraction.

744. Reduce $\frac{3}{4}$ of 4-6 of 7-10 of 15-17 to a simple fraction.

745. Multiply 8-15 of $12\frac{1}{4}$ by 1-5 of $7\frac{1}{8}$.

746. Divide $\frac{3}{4}$ of $1\frac{1}{2}$ by $\frac{2}{8}$ of $\frac{1}{2}$.

747. In what terms of multiplication may equal factors be cancelled?

748. In what terms in division?

749-750. A note for \$250, dated June 5, 1874, was paid Feb. 14, 1875, with simple interest at 8 per cent. What was the amount? (Two credits.)

(March 2, 10:00 A. M.-12:00 M.)

751. What is ratio, and—752. How is it expressed?

753. What is proportion, and—754. How expressed?

755. What are the 1st and 3d terms of a proportion called, and—756. The 2d and 4th?

757. What are the extremes of a proportion, and what the means?

758. Given the means and one extreme of a proportion, how may the other extreme be found?

759. Given the first, second and fourth terms of a proportion, how may the third be found?

760. In the question: If four tons of coal cost \$24, what will 12 tons cost, what is the given ratio?

761. State and solve the proportion given in Q. 760.

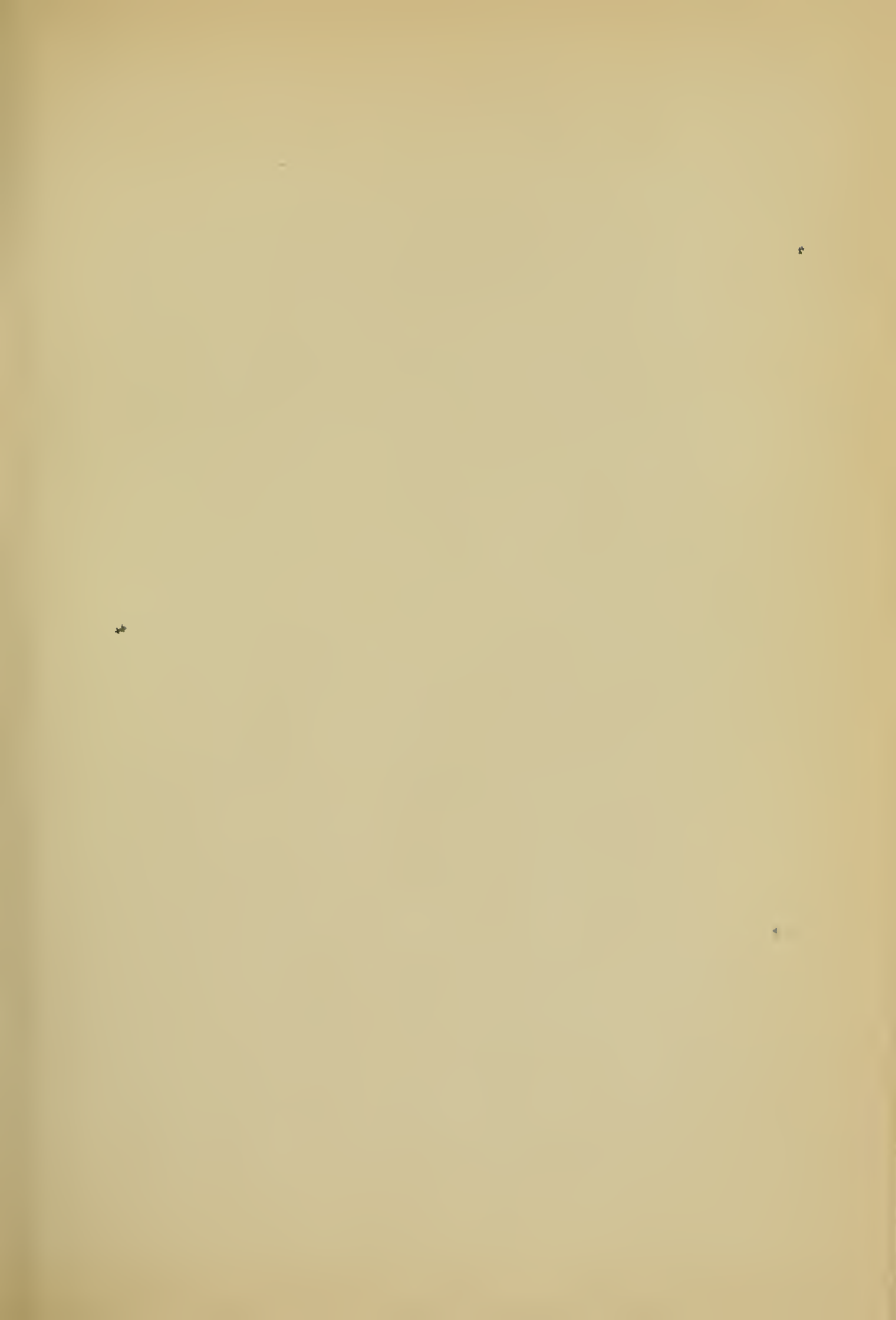
762. Change $4-7=12-21$, to the form of a proportion.

763-764. Albany is $73^{\circ} 44' 50''$ West Longitude: San Francisco is $122^{\circ} 26' 45''$. When it is noon at Albany, what is the time at San Francisco? (Two credits.)

765. What will \$864.50 amount to in two years at 8 per cent. compound interest?

766. If 10 tons of hay will support 5 horses 8 mo., how many horses will 18 tons support one year? (Solve by double proportion.)

767. How many men will be required to build 32 rods of wall in the same time that 5 men will build 10 rods? (Solve by analysis.)



THE
REGENTS' QUESTIONS,
1866-1876.

GEOGRAPHY.

Examination I. Nov. 7, 1866.

(9:00-10:30 A. M.)

1. Mention the grand divisions of the earth, and state within which hemispheres (northern or southern, and eastern or western) each is principally included.
2. Give a similar statement in relation to the several oceans.
3. Describe the *equator*, the *tropics*, and the *polar circles*.
4. Define latitude and longitude.
5. Name the several zones, and state within or between what circles each is included.
6. Illustrate the relative positions of the equator, tropics, polar circles, and zones, by a small circular diagram similar to an outline map of a hemisphere.
7. Mention the three largest islands of the globe, (ex-

cepting the so-called continents,) in the order of their size.

8. What *bay* and *strait* separate British America from Greenland ?

9. What parallel of latitude forms the northern boundary of the United States from the Lake of the Woods to the Gulf of Georgia ?

10. What is the capital of Canada, and how is it situated ?

11. What strait connects Lake Huron and Lake Michigan ?

12. What is the capital of California ?

13. What river forms part of the boundary between New York and Pennsylvania ?

14. Name and describe the largest river within the state of Virginia.

15. Which are the three largest of the West India Islands ?

16. Where and what is Terra del Fuego ?

17. Mention the countries comprised in the British Isles.

18. What strait separates Spain from Africa ?

19. What mountains between Norway and Sweden ?

20. What large river of Russia empties into the Black Sea ?

21. What mountains form the boundary line between China and Hindoostan ?

22. Where is the empire of Japan, and of what does it consist ?

23. Is the greater part of Africa north or south of the equator ? Represent the shape of Africa by a small outline map, and draw a line across it to correspond to the position of the equator.

24. Where is the island of St. Helena ? (Nearest which grand division, in what ocean, and hemispheres, and in about what latitude and longitude ?)

Examination II. Feb. 28, 1867.

(9:00-10:30 A. M.)

25. Define *Circles of Longitude*?
26. What countries of the globe are crossed by the Arctic Circle?
27. What is the longitude of N. Y. City, reckoning from Greenwich? (The minutes and seconds are not required.)
28. Which of the United States have no sea coast?
29. Through what state does the Mississippi flow?
30. On what waters may one sail from New York to Philadelphia?
31. What river connects Lake Superior with Lake Huron?
32. What river rises in the western part of North Carolina and flows into the Ohio?
33. In what direction is the Isthmus of Darien from the mouth of the Orinoco?
34. What countries of South America are crossed by the Equator?
35. Name the three largest rivers of South America.
36. What countries of Europe border on the Mediterranean Sea?
37. Describe the river Rhine.
38. What is the capital of Prussia?
39. What range of mountains in Austria?
40. Describe the river Rhone.
41. Where is Calcutta situated?
42. Where is Mt. Sinai?
43. What strait at the eastern extremity of Siberia?
44. What is the capital of Japan?
45. Describe the river Niger?
46. In what direction do the Mountains of the Moon extend?
47. What is the largest island of Oceanica?

48. In what Zone is the Cape of Good Hope?

Any pupil who has the requisite time, may show by a small diagram, the relative position of lines of latitude and longitude on a map of the northern hemisphere.

Examination III. June 13, 1867.

(9:00-10:30 A. M.)

49. In what part of the world is the point of no latitude and no longitude, (reckoning longitude from Greenwich?)

50. What is the width, in degrees, of each temperate zone?

51. How can we determine, by a map, the line or ridge of high land, called a *water-shed*, which divides a country into opposite slopes?

52. What are the two principal water-sheds of the United States?

53. What three large cities of North America are located near the 20th, 30th and 40th degrees of north latitude, respectively?

54. On what parallel of latitude is the boundary of New York, from Lake Champlain to the river St. Lawrence?

55. What parallel of latitude forms the boundary between Virginia and North Carolina?

56. What parallel forms the northern boundary of Georgia, Alabama and Mississippi?

57. What four states border on Lake Michigan?

58. How is Alabama bounded?

59. What river flows into the northern extremity of the gulf of California?

60. What country occupies the north-western extremity of South America?

61. What country of South America has no sea coast?

62. What three great rivers of Europe rise in the Alps, and where do each of them empty?

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63. What mountain range passes through the whole length of Italy?
 64. Into what sea does the river Elbe empty?
 65. What countries occupy the Scandinavian peninsula?
 66. What strait separates England from France?
 67. What three peninsulas on the southern border of Europe?
 68. What other continent has also three large peninsulas on its southern border, and what are their names?
 69. What is the general direction of peninsulas in any continent?
 70. What large city is situated at the mouth of the Ganges?
 71. What gulf in the north-western part of the Red Sea?
 72. What country of Africa borders on the strait of Gibraltar?

Examination IV. Nov. 7, 1867.

(9:00-10:30 A. M.)

73. What is the amount of the greatest longitude?
74. What bay west of Greenland?
75. What parallels of latitude form parts of the northern boundary of the United States?
76. What river forms part of the northeastern boundary of the United States?
77. What lake between lake Huron and lake Erie?
78. What states are separated by the Wabash river?
79. What is the outlet of Lake Champlain?
80. On what river is Rochester situated?
81. Of what river is the Juniata a branch?
82. What two ranges of mountains in Virginia?
83. What peninsula forms the south part of Greece?

84. What is the capital of Prussia?
 85. Describe the Rhine.
 86. Describe the Danube.
 87. On what river is Paris situated?
 88. What large sea north of Prussia?
 89. In what zone is the greater part of Asia?
 90. What mountains between China and Hindoostan?
 91. Describe the river Ganges.
 92. What sea between Arabia and Hindoostan?
 93. What two large islands on the Equator south east of Asia?
 94. What are the two largest rivers in Africa?
 95. What large island east of Africa?
 96. What group of islands west of Morocco?
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Examination V. Feb. 20, 1868.

(9:30-10:30 A. M.)

97. Which extends further south—the Old World or the New?
98. In what Zone are the most highly civilized nations?
99. What connects the Pacific with the Arctic Ocean?
100. What change in temperature occurs in going from the base of a high mountain towards its summit?
101. What is the largest river flowing into Hudson's Bay?
102. What large city on the western coast of the United States?
103. Which of the New England States has the highest mountains?
104. What lake is crossed by the northern boundary of Vermont?
105. What mountains in the northern part of the State of New York?

106. What city in Delaware at the mouth of the Delaware River?

107. On which side of the Mississippi is the greater part of Louisiana?

108. Why has South America no large rivers flowing westward?

109. What is the only country lying wholly on the western slope of the Andes?

110. What islands east of the southern extremity of South America?

111. What is the south-western point of England called?

112. What two large lakes south-west of the White Sea?

113. What large river flows through Austria?

114. What sea east of Italy?

115. What waters between the Grecian Archipelago and the Black Sea?

116. What waters are connected by the strait of Babelmandeb?

117. What peninsula between the Yellow Sea and the sea of Japan?

118. What important country of Asia consists of islands only?

119. What country on the Mediterranean next west of Egypt?

120. What cape forms the most eastern point of Africa?

Examination VI. June 4, 1868.

(9:00-10:30 A. M.)

121. In what direction does the Gulf Stream flow?

122. What large island east of the Gulf of St. Lawrence?

123. What island at the mouth of river St. Lawrence?

124. Which thirteen of the United States border on the Atlantic Ocean ?
 125. What is the highest peak of the White Mountains ?
 126. What island at the mouth of the Hudson, between New Jersey and Long Island ?
 127. What large bay in the State of Maryland ?
 128. What mountains separate the States of Virginia and West Virginia ?
 129. On what river is the capital of Tennessee situated ?
 130. What States are separated by the Sabine river ?
 131. Which is further west, New Orleans or Lima ?
 132. In what latitude is the mouth of the Amazon ?
 133. What divisions of South America border on the Pacific ocean ?
 134. What are the three great rivers of South America ?
 135. Which is the further north, Paris or Quebec ?
 136. What is the capital of Denmark ?
 137. Which is the largest lake in Europe ?
 138. What river flows into the Gulf of Lyons ?
 139. Through what waters would a vessel pass in going from New Orleans to Smyrna ?
 140. In what direction do the trade winds blow ?
 141. In what latitude is the Strait of Gibraltar ?
 142. What is the capital of Persia ?
 143. What mountains in the northern part of Africa ?
 144. Which is the largest of the Sandwich Islands ?
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Examination VII. Nov. 12, 1868.

(9:00-10:30 A. M.)

145. What is meant by *small circles* of a sphere ?
146. What does the eastern continent comprise ?
147. Which is the smallest of the United States ?
148. What States bound Florida on the north ?

149. What States bound Wisconsin on the west ?
150. Name three of the western branches of the Mississippi river.
151. Between what States does the Connecticut river flow ?
152. In what direction is Montreal from Quebec ?
153. What two large peninsulas in Mexico ?
154. In what direction is Buenos Ayres from Rio De Janeiro ?
155. What is the capital of Turkey ?
156. What important seaport in the south of France ?
157. What island south of Hindoostan ?
158. What large desert in the Chinese Empire ?
159. What mountains between Siberia and the Chinese Empire ?
160. Is Liberia in north or south latitude ?
161. What circle bounds the torrid zone on the north ?
162. Describe the Antarctic circle.
163. Between what grand divisions is the Atlantic Ocean ?
164. Which is the largest lake of fresh water on the globe ?
165. Which is the largest island sea ?
166. What is the latitude of Washington city (degrees only ?)
167. What is the longitude of New York city (degrees only ?)
168. By what waters may a vessel pass from Providence, R. I., to Nashville, Tenn. ?

Examination VIII. Feb. 18, 1869.

(9:00-10:30 A. M.)

169. How many degrees from the equator is the Arctic Circle ?

170. By what circle is the South Temperate Zone bounded ?

171. Why do degrees of longitude vary in length at different places on the earth's surface ?

172. In what State is the geographical centre of the United States ?

173. Which State extends further north, Main or Minnesota ?

174. What State extends further south, Florida or Texas ?

175. Mention the capitals of the Middle States.

176. Bound the State of Missouri.

177. Trace the water communication between Chicago and Pittsburgh.

178. To what European government does Cuba belong ?

179. What is the capital of Venezuela ?

180. What large river empties into the Atlantic near Buenos Ayres ?

181. What waters separate England and Ireland ?

182. By what route could a vessel sail from Marseilles to St. Petersburg ?

183. What is the capital of Austria, and where is it situated ?

184. On what river is the city of Rome located ?

185. In what zone is Iceland ?

186. What large island near the eastern extremity of the Mediterranean Sea ?

187. In what does the river Indus empty ?

188. What is the general direction of the rivers of China ?

189. What bodies of water does the isthmus of Suez separate ?

190. What countries of Africa border on the Mediterranean Sea ?

191. Describe the Mozambique Channel.

192. In what zone does the highest civilization exist ?

Examination IX. June 10, 1869.

(9:00-10:30 A. M.)

193. What two revolutions does the earth perform ?
194. What do each of these revolutions produce ?
195. What is meant by the *cardinal points* ?
196. Which one of the five zones has more land surface than any other ?
197. In which zone are volcanoes most numerous ?
198. Why are there few lakes in the torrid zone ?
199. Which is the longest mountain system of the globe ?
200. Which grand division is crossed by both the tropical circles ?
201. What is the general direction of the longest right line that can be drawn across the eastern continent ?
202. Which of the grand divisions are peninsulas ?
203. What river has its basin in the southern part of the great central plain of South America ?
204. What group of islands between North and South America ?
205. What island north-west of Europe, partly in the western hemisphere ?
206. What large river of the United States flows into the Pacific Ocean ?
207. Which is the largest western branch of the Mississippi river ?
208. Which is the largest branch of the Ohio river ?
209. Which of the thirty-seven United States extends farthest north ?
210. Which of the United States are intersected by the Mississippi river ?
211. What river bounds Iowa on the west ?
212. What city of Wisconsin is situated on Lake Michigan ?
213. What island in the Niagara river ?

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214. What sea between Russia and Sweden?
215. What is the capital of Holland?
216. Which of the five races of men is the most numerous?
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Examination X. Nov. 12, 1868.

(9:00-10:30 A. M.)

217. How must a place be situated to be in north latitude?
218. How must a place be situated to be in east longitude?
219. How many seasons has the torrid zone?
220. Where are the richest silver mines of the globe?
221. Into what races are mankind divided?
222. What grand divisions lie wholly north of the equator?
223. What two gulfs of North America are crossed by the Tropic of Cancer?
224. Where is the Tropic of Cancer most nearly approached by the United State?
225. What large river in the western part of the United States has its source in British America?
226. In what mountains does the Hudson river rise?
227. What river forms part of the boundary between New York and Pennsylvania?
228. What river empties into the head of Chesapeake Bay?
229. Through what two States does the Chesapeake Bay extend?
230. What two rivers receive the waters of all the streams of Iowa?
231. Of what division of South America is the Isthmus of Panama a part?
232. Along what three rivers are the principal lowland plains of South America?

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233. Is the greater part of Brazil in north or in south latitude?
234. What range of mountains forms a natural boundary between France and Spain?
235. What noted river of Europe empties into the North Sea?
236. Into what sea do all the rivers of South Russia empty?
237. What sea is between England and Denmark?
238. What important group of islands east of the Chinese Empire?
239. In what country of Asia is Mt. Ararat?
240. In what zones is Africa?
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Examination XI. Feb. 18, 1870.

(9:00-10:30 A. M.)

241. What oceans border on the Eastern Continent?
242. Between what two grand divisions has the Atlantic Ocean its greatest breadth?
243. How many English miles from the equator is a place that is ten degrees north of it?
244. What grand divisions are crossed by the meridian of Greenwich?
245. Is Australia in east or in west longitude, reckoning from Greenwich?
246. In which zone is the southern extremity of South America?
247. Which one of the United States lying wholly east of the meridian of Washington has no ocean coast?
248. What States border on Pennsylvania?
249. Which one of the United States consists of two peninsulas?
250. How is Kansas bounded on the north?
251. What is the chief town of Nova Scotia?
252. What two large peninsulas in Mexico?

253. In what mountains does the Amazon river rise ?
 254. Between what two rivers is Paraguay situated ?
 255. What country occupies the southern extremity of South America ?
 256. What sea between Russia and Sweden ?
 257. What five countries of Europe border on the Mediterranean Sea ?
 258. Which are the five great powers of Europe ?
 259. What country bounds Greece on the north ?
 260. What is the name of the principal desert of Asia ?
 261. What is the capital of Persia ?
 262. What large bay east of Hindoostan ?
 263. In what zone or zones is the Sahara desert ?
 264. What large gulf on the western coast of Africa near the equator ?

Examination XII. June 10, 1870.

(9:00-10:30 A. M.)

265. Which extends farther east ; the United States or Brazil ?
 266. Which is the more westerly ; Cape Horn or Cape St. Lucas ?
 267. Which ocean has the greater breadth ; the Atlantic between South America and Africa, or the Indian, between Africa and Australia ?
 268. In what zones is Australia situated ?
 269. What large bay east of Lake Huron and north of Lake Erie ?
 270. What bodies of water are connected by the Welland Canal ?
 271. Prove that Lake Superior is (or is not) more elevated than the Atlantic Ocean ?
 272. Mention any sea or lake upon the globe whose surface is lower than the surface of the ocean.
 273. Mention all the States bordering upon Illinois.

274. In sailing up the Mississippi river from its mouth to the latitude of Chicago, what States, or parts of States, might you see upon the eastern shore ?

275. Which are the so-called "Gulf States ;" or, what States border upon the Gulf of Mexico ?

276. Which is the highest mountain in New England ?

277. What large river east of and nearly parallel to the Hudson River ?

278. Between what two rivers is Philadelphia situated ?

279. Mention one of the three large rivers of Virginia, south of and nearly parallel to the Potomac, and emptying into the Chesapeake Bay ?

280. On which coast of Cuba, the northern or the southern, is Havana, the capital, situated ?

281. What large river flows through Venezuela ?

282. What two large rivers unite to form the Rio de la Plata ?

283. What country of Europe partly encompasses the White Sea ?

284. What country of Europe is situated between the Adriatic and a part of the Mediterranean Seas ?

285. What range of mountains extends from the Bay of Biscay to the Mediterranean Sea ?

286. In what direction from China is the China Sea ?

287. What is the capital of Japan ?

288. What large lake of Africa, on or near the equator, at the head of the river Nile ?

Examination XIII. Nov. 11, 1870.

(9:00-10:30 A. M.)

289. What part of North America has the greatest longitude, *i. e.*, extends farthest west ?

290. What zone contains the greatest number of islands ?

291. Which has the greater circumference: the Tropic of Cancer or the 30° circle of latitude ?

292. In what direction is the Caribbean Sea from the Gulf of Mexico?

293. Is the Sea of Kamchatka in the Eastern or in the Western Hemisphere?

294. In what latitude is the mouth of the Amazon river?

295. Mention a large gulf, or a bay, in North America, so nearly surrounded by land as to be almost a *mediterranean* or *inland* sea.

296. What is the name of the outlet of Lake Huron?

297. Mention some of the United States territories which are traversed by the Rocky mountain range.

298. Which of the United States border on the Pacific Ocean?

299. Which extends further north, the Gulf of Mexico or the Gulf of California?

300. Mention one of the United States which has more than one capital city.

301. What State is indented by the Narraganset Bay?

302. Which two New England States have a joint river margin or boundary?

303. To what State do Nantucket and Martha's Vineyard belong?

304. What river is crossed three times by the southern boundary of the State of New York?

305. Which one of the Middle States is nearly surrounded by water (sea coast and river)?

306. Which of the United States border on Lake Superior?

307. What large river of Europe empties into the Caspian Sea?

308. What large river empties into the Black Sea from the west?

309. What large river of France empties into the Mediterranean Sea?

310. In what direction is Moscow from St. Petersburg?

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311. What is the capital of China ?
312. What mountain range between China and Siberia ?
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Examination XIV. Feb. 24, 1871.

(9:00-10:30 A. M.)

313. What is the axis of the earth ?
314. Which grand divisions are *partly* within the Southern Hemisphere ?
315. Which two grand divisions are traversed throughout their entire length by a continuous mountain range ?
316. Which is the highest mountain peak of North America ?
317. What large islands east of the Gulf of St. Lawrence ?
318. What large river forms the greater part of the joint boundary of Oregon and Washington territory ?
319. Mention eight cities in the State of New York.
320. What lake lies between Lake Champlain and the head waters of the Hudson river ?
321. What river forms the entire eastern boundary of Pennsylvania ?
322. What States are bounded on the south by the Ohio river ?
323. What large lake in Central America ?
324. What four islands form the group known as the Greater Antilles ?
325. Mention eight of the twelve countries of South America ?
326. Which one of these countries is traversed by the Orinoco river ?
327. What country of South America has no sea coast ?
328. On what river of France is Paris situated ?
329. What large bay west of France ?
330. What range of mountains extends from the Black to the Caspian sea ?

331. Mention four seas in and around Russia.
332. To what European power does Australia belong ?
333. In what zone is the greater part of Siberia ?
334. What inland gulf lies between the Arabian sea and the eastern end of the Mediterranean ?
335. What strait separates Morocco from Europe ?
336. What large river flows into the gulf of Guinea ?

Examination XV. June 9, 1871.

(9:00-10:30 A. M.)

337. Mention the grand divisions of the Earth, and state within which Hemispheres (northern or southern, and eastern or western) Asia is principally included.
338. Give a similar statement in relation to the Hemispheres within which the Indian Ocean is included.
339. Describe the *equator*, the *tropics* and the *polar circles*.
340. Define *latitude* and *longitude*.
341. Name the several *zones* and state within or between what circles each is included.
342. Illustrate the relative positions of the equator, tropics, polar circles, and zones, by a small diagram similar to an outline map of a Hemisphere, and letter each of these parts of the diagram.
343. What is the width, in degrees, of each temperate zone ?
344. What *bay* and *strait* separate British America from Greenland ?
345. What parallel of latitude forms the northern boundary of the United States from the Lake of the Woods to the gulf of Georgia ?
346. What is the capital of the Dominion of Canada, and where is it situated ?

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347. What strait connects Lake Huron with Lake Michigan ?
348. What is the capital of California ?
349. What river forms part of the boundary between Maryland and Virginia ?
350. Mention and describe the largest river within the United States.
351. Which are the three largest of the West India Islands ?
352. Where and what is Terra del Fuego ?
353. Mention the countries comprised in the British Isles ?
354. What separates Spain from Morocco ?
355. What mountains between Norway and Sweden ?
356. What large river empties into the Black Sea from the west ?
357. What mountains between the Chinese Empire and Hindoostan ?
358. Where is the empire of Japan, and of what does it consist ?
359. Is the greater part of Africa north or south of the equator ? Represent the shape of Africa by a small outline map, and draw a line across it to show the position of the equator.
360. Where is the island of St. Helena ? (Nearest what grand division, in what ocean and hemispheres) ?
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Examination XVI. Nov. 10, 1871.

(9:00-10:30 A. M.)

361. Bound the South Temperate Zone.
362. What is the latitude of the northern boundary of Vermont ?
363. Mention all the grand divisions which lie partly in the North Temperate Zone.

364. What noted group of islands in the Pacific Ocean west of Mexico ?

365. What grand division would be reached in sailing east from Australia ?

366. What gulf on the Pacific coast of the Western Hemisphere ?

367. What five large lakes are drained by the river St. Lawrence ?

368. Mention three tributaries of the Mississippi river, from the west.

369. On what river is the city of Hartford situated ?

370. What river rises in western Massachusetts and flows through Connecticut ?

371. In what mountains does the Hudson river rise ?

372. Which of the United States border on Lake Erie ?

373. Which states bound North Carolina and Tennessee on the south ?

374. What is the capital of California ?

375. What city and island in the St. Lawrence opposite the mouth of the Ottawa river ?

376. Into what four provinces is the Dominion of Canada divided ? (NOTE: There are now but two.)

377. What country of South America bounds Peru on the north ?

378. What country of South America is an Empire ?

379. What two large seas lie between the British Isles and the central part of Russia ?

380. What name is given to the peninsula between the Mediterranean and the Black Seas ?

381. What two rivers empty into the Persian Gulf ?

382. What mountain range extends southward from Abyssinia ?

383. Which grand division has the warmest average climate ?

384. What continent lies wholly in the Southern Hemisphere ?

Examination XVII. Feb. 28, 1872.

(9:00-10:30 A. M.)

385. Which is the larger : Africa or South America ?
386. Which ocean is entirely within the Eastern Hemisphere ?
387. What three oceans are partly within the South Temperate Zone ?
388. In what direction is Madagascar from Australia ?
389. What two large islands of the Eastern Hemisphere are crossed by the equator ?
390. What ocean receives the largest amount of water from the continental river systems ?
391. In what direction is the mouth of the Amazon from the mouth of the Mississippi ?
392. What city is located on the Boston and Albany railroad at its intersection with the Connecticut river ?
393. Mention five lakes lying wholly within the State of New York.
394. What city is situated in the south-western part of Pennsylvania ?
395. Is Philadelphia in east or in west longitude (reckoning from Washington) ?
396. What is the capital of Alabama ?
397. What States bound Florida on the north ?
398. What large bay is situated on the western border of Lake Huron ?
399. What great lake borders on Minnesota ?
400. Which are the two largest rivers that empty into the Gulf of Mexico ?
401. What is the capital of Brazil ?
402. What country of South America is traversed by the Orinoco river ?
403. Which extends further south ; Norway or Sweden ?
404. Mention four large islands of the Mediterranean Sea ?

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405. Of what country is Vienna the capital?
 406. What channel between Ireland and Wales?
 407. Near what river and bay is Calcutta situated.
 408. In what direction is New York city from the North Pole?
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Examination XVIII. June 7, 1872.

(9:00-10:30 A. M.)

409. How are the Arctic and Pacific Oceans connected?
410. On which Hemisphere (eastern or western,) is the meridian 170° east longitude from Greenwich?
411. Is New Zealand in the Eastern or Western Hemisphere?
412. Mention a river of North America that flows in a northerly direction.
413. Mention one of the rivers of Maine.
414. How many square miles in the State of New York (in round numbers)?
415. Which State has the larger territory: New York or California?
416. What is the population of the State of New York (in round numbers)?
417. How many counties are there in New York State?
418. Which county of New York extends farthest east?
419. What State bounds Kansas on the east?
420. What is the capital of Illinois?
421. What States would be crossed in passing direct from Indiana to Alabama?
422. Mention any one of the United States which has no sea or lake coast.
423. Mention a tributary of the Missouri river.
424. Mention one of the peninsulas adjacent to the Gulf of Mexico.
425. Which is nearer the equator: Cuba or Jamaica?

426. What country bounds the Argentine Confederation on the north ?
427. What large river of Colombia, S. A., empties into the Caribbean Sea ?
428. What large sea is situated about midway between the Adriatic and Caspian Sea ?
429. Mention one of the gulfs adjacent to the Baltic Sea.
430. In what direction is Corsica from Sardinia ?
431. What noted river empties into the Dead Sea ?
432. On which coast of Africa is Senegambia ?

Examination XIX. Nov. 8, 1872.

(9:00-10:30 A. M.)

433. What place upon the earth's surface is south from every other place ?
434. What zone has no sunlight during our summer ?
435. In sailing due east, which does a ship change: its latitude or its longitude ?
436. Which is the larger: North America or South America ?
437. In what ocean are the Japan Islands ?
438. What ocean between Africa and Australia ?
439. What peninsula lies between the Arabian Sea and the Bay of Bengal ?
440. In what direction is San Francisco from the Isthmus of Darien ?
441. Does the greater part of the area of the United States (including territories) lie east or west of the Mississippi river ?
442. What territory between Kansas and Utah ?
443. What state between Utah and California ?
444. Which has the greater elevation above the ocean ; Lake Erie or Lake Huron ?

445. What large town of Massachusetts is situated on the Boston and Albany railroad, about midway between Boston and Springfield ?

446. Which is the least populous county of the State of New York ?

447. What river rises in the State of New York and empties into the Chesapeake Bay ?

448. What State bounds Tennessee on the east ?

449. What sea lies south of the West Indies ?

450. What is the capital of Brazil ?

451. Of what country is Santiago the capital ?

452. Mention one of the countries of South America wholly in north latitude.

453. What country of South America is between Colombia and Peru ?

454. What range of mountains separates Spain and Portugal from the rest of Europe ?

455. What river empties into the North Sea at the Hague ?

456. Mention one of the rivers that empty into the Caspian Sea.

Examination XX. Feb. 28, 1873.

(9:00-10:30 A. M.)

457. What general name is given to the several parts into which the whole of the earth's surface is divided by the tropics and polar circles ?

458. What lines on maps indicate north and south directions ?

459. What large river of North America empties into the Pacific ocean ?

460. What peninsula south of the Gulf of Mexico ?

461. Mention the largest river that empties into Long Island Sound.

462. What mountain chain traverses Vermont ?

463. Mention the largest river within the State of New Hampshire.

464. What general name is given to the mountains west of Lake Champlain ?

465. Mention a tributary of the Potomac river.

466. What large city is situated at the junction of the Allegany and Monongahela rivers ?

467. On what river is the capital of Virginia situated ?

468. What lake lies between Michigan and Wisconsin ?

469. What large city is situated in the south-western part of Ohio ?

470. Mention a city in the eastern part of Wisconsin.

471. What two rivers having the same name empty into the Gulfs of Mexico and California, respectively ?

472. What is the capital of Minnesota ?

473. Mention one of the four provinces of the Dominion of Canada.

474. What country of South America bounds Colombia on the east ?

475. In what direction is England from Spain ?

476. What is the capital of Norway ?

477. What large city is situated between the Black Sea and the Sea of Marmora ?

478. What country bounds the Chinese Empire on the north ?

479. What mountains are situated in the north-western part of Africa ?

380. What large river empties into the Gulf of Guinea ?

Examination XXI. June 6, 1873.

(9:00-10:30 A. M.)

481. What part of the earth's surface has no sunlight at the time of our midsummer ?

482. Mention one of the conditions upon which climate depends.

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483. Which zone contains most of the coral islands ?
484. In what general direction does the Gulf Stream flow off the United States coast ?
485. In what ocean is the geographical centre of the Eastern Hemisphere ?
486. Which grand division lies partly in the Eastern and partly in the Western Hemisphere ?
487. What province bounds Maine on the east ?
488. Among what mountains does the Hudson river rise ?
489. What river flows between South Carolina and Georgia ?
490. On what river is St. Louis situated ?
491. What ocean receives the principal drainage of South America ?
492. What country lies almost wholly on the western slope of the Andes mountains ?
493. What is the name of that arm of the ocean into which the Parana river empties ?
494. What is the capital of the Argentine Republic ?
495. What sea lies west of Denmark ?
496. Of what empire is Vienna the capital ?
497. Through what country does the lower part of the Danube flow ?
498. In what country of Asia is the river Ganges ?
499. What sea forms part of the northern boundary of Persia ?
500. Mention one of the large rivers of the Chinese Empire.
501. In what ocean is Madagascar ?
502. Which extends further south : Africa, Australia or South America ?
503. Mention one of the ranges of mountains between the Red Sea and the Cape of Good Hope.
504. Towards which pole does the sun cast shadows at midday, in the south temperate zone ?

Examination XXII. Nov. 7, 1873.

(9:00-10:30 A. M.)

- 405-509. Mention and bound each of the five zones.
510. Which State of New England has the highest mountains ?
- 511-513. What States east of the Mississippi river have neither sea nor lake coast ?
- 514-516. What States border on Lake Superior ?
517. What river forms part of the boundary between New York and Pennsylvania ?
518. Through what States does the Mississippi flow ?
- 519-520. What parallels of latitude form parts of the northern boundary of the United States ?
- 521-522. Which are the two largest of the West India Islands ?
- 523-524. Mention two countries of South America that are crossed by the equator.
525. What country of South America lies wholly upon the western slope of the Andes Mountains ?
- 526-528. Mention three peninsular countries in the south of Europe.
- 529-532. Mention the four countries comprised in the British Isles.
- 533-535. What three noted rivers of Europe rise among the Alps ?
- 536-538. Into what sea do each of these three rivers (533-535) empty ?
539. What important country of Asia consists of islands only ?
540. What strait at the eastern extremity of Siberia ?
- 541-542. What are the two largest rivers of Africa ?
543. What sea is connected with the ocean by the Strait of Bab el Mandeb ?
544. What country of Africa borders on the Strait of Gibraltar ?

Examination XXIII. Feb. 27, 1874.

(1:30-3:00 P. M.)

What great circle separates (545) the Northern from the Southern Hemisphere; and what one (546) the Eastern from the Western?

547. Does the Northern or the Southern Hemisphere contain more land surface; and, in like manner, (548) the Eastern or the Western?

Mention, as nearly as you can in the order of size, beginning with the largest, the six grand divisions of land on the Earth's surface: (549)——; (550)——; (551)——; (552)——; (553)——; (554)——.

Mention in like order as above, the five oceans: (555)——; (556)——; (557)——; (558)——; (559)——.

Give the (560) latitude, and the (561) longitude (from Greenwich) of the central point on the map of the Western Hemisphere.

Mention the largest gulf on the American side of the (562) Atlantic, and (563) Pacific Oceans, respectively.

Mention five of the lakes drained by the river St. Lawrence: (564)——; (565)——; (566)——; (567)——; (568)——.

What two peninsulas and large intervening islands partially separate the Gulf of Mexico from the Caribbean Sea? (569)——; (570)——; (571)——.

572. What body of water, in size approaching the Gulf of Mexico, is comprised within the limits of North America?

Mention five of the seas into which a vessel might sail going eastward from the Strait of Gibraltar: (573)——; (574)——; (575)——; (576)——; (577)——.

Mention four bodies of water (seas, gulfs and bays) into which a vessel may sail from the Indian Ocean: (578)——; (579)——; (580)——; (581)——.

Mention three inland Asiatic Seas, each having no outlet: (582)——; (583)——; (584)——.

Examination XXIV. June 5, 1874.

(1:30-3:00 P. M.)

585-587. Give three proofs that the earth is spherical.

588. What is the situation of places whose time of day agrees with our own?

589. What is the situation of places which have the same length of day and night that we have?

590. In what ocean is a ship which is in 10° S. latitude and 70° E. longitude from Greenwich?

591. By what two bodies of water are the Arctic and Pacific Ocean connected?

592. Draw the outline of a hemispherical map, with the usual number of great and small circles; (593) indicate the point of no latitude and no longitude by a 0; (594) and mark its number of degrees on each parallel and meridian represented.

595. To what great river system does Lake Champlain belong?

596. Bound the State of Connecticut.

597-599. What three groups of islands are included in the West Indies?

600-601. What peninsula and island are partly in the Eastern and partly in the Western Hemisphere?

602. What is the season of the year at Cape Horn in July?

603. What European sea borders on the Arctic Ocean?

604-608. Mention five ranges of mountains each either within or bordering upon Europe.

609-614. Mention six of the islands of the Mediterranean sea?

615-618. Mention four seas which form parts of the western boundary of Asia.

619. On what river is Nankin situated?

620-622. Of what three divisions does Oceanica consist?

623-624. What is the largest island adjacent to Africa, and what body of water separates them?

Examination XXV. Nov. 6, 1874.

(1:30-3:00 P. M.)

625-626. What parallels of latitude are in the northern boundary of the United States ?

627. What river rises in Pennsylvania and flows north through New York into Lake Ontario ?

628. Is the southern point of Florida, or the mouth of the Rio Grande, further south ?

629. What is the distance, in statute miles, from the most southern limit of the United States, in about 26° N. latitude, to the northern boundary, on the meridian of that limit ?

630. What river rises in the United States whose waters flow through a lake into Hudson's Bay ?

631. What river is between Lower Canada (or Province of Quebec) and Upper Canada (or Ontario) ?

632. What two Provinces of British America are wholly south of the river St. Lawrence ?

633. What is the general direction of peninsulas ?

634-635. What is the extent north and south of South America in degrees and in miles, the latitude of the Isthmus of Panama being 9° north ?

636-637. What are the two principal water sheds of the United States ?

638-639. What river of Africa empties into the Mediterranean, and through which part does it flow ?

640. In what zone is the highest civilization ?

641. Where are the Islands of Japan ?

642-645. What four seas on the eastern coast of Asia ?

646. Of what does the British Empire consist ?

647. What islands in the Mediterranean belong to Great Britain ?

648-655. Through what bodies of water will a ship pass on the shortest way from London to Calcutta ?

656-659. What countries of Europe touch the Baltic Sea, and what (660-664) the Mediterranean ?

Examination XXVI. Feb. 26, 1875.

(1:30-3:00 P. M.)

665. What is Latitude; (666) on what circle is it measured; (667) are degrees of Latitude of equal length?

668. What points on the earth's surface have the greatest latitude, and what is it?

669. How many statute miles in a degree of latitude?

670. The length of a degree of latitude being known, how can the earth's circumference be found?

671. What is Longitude; and (672) from what meridian or meridians, on your map, is it reckoned?

673. How many degrees of longitude may there be?

674. Are degrees of longitude of equal length?

675. Where are degrees of latitude and longitude of equal length? (These questions are on the supposition that the earth is a perfect sphere.)

676. What is the longitude of the Poles?

677. How is the situation of any place on the earth determined?

678. Bound the Atlantic Ocean.

679-682. Mention four Atlantic groups of islands.

683. What large island partly in the Atlantic and partly in the Arctic Oceans?

684-688. Mention five groups of islands in the Pacific Ocean, included in Oceanica.

689. In what general direction will a ship sail in going from New York to Liverpool?

690-694. Which are the five principal bays on the Atlantic coast of the United States?

Describe the (695) Hudson and the (696) Connecticut rivers;—where each rises, in what direction it flows, and where it empties.

697. Mention and describe the largest river which flows into Delaware Bay.

698-700. Mention the three largest rivers of South America which flow into the Atlantic.

701. Mention five countries of South America which border on the Atlantic, (702) four on the Pacific, (703) one wholly inland, and (704) six countries of Asia.

Examination XXVII. June 4, 1875.

(1:30-3:00 P. M.)

705. In what general direction do the rivers of the Eastern and Middle States flow, and (706) those of the Southern States which empty into the Atlantic?

709-709. Mention three rivers which empty into Long Island Sound.

What large river empties into (710) New York Bay? (711) into Delaware Bay? (712) into Chesapeake Bay?

713. What river forms about half of the southern boundary of the United States?

714. Mention the most extensive river basin of the United States; (715) where does this basin begin on the north, and (716) where terminate south?

717. Mention five States on the eastern, and (718) five on the western slope of this basin.

Mention two rivers in the northern part of the United States whose sources are near each other; (719) one of which empties into the Pacific, and (720) and the other by the Mississippi into the Gulf of Mexico.

721. Mention the four great lakes between the United States and Canada; (722) what large lake connected with these is wholly in the United States?

723. What extensive mountain chain in the western part of the United States, and (724) what is its general direction? (725) What mountain chain in the eastern part, and (726) what is its direction?

What (727) state and what (728) province bound the Eastern States on the west?

729-733. Through what principal waters may the products of the western States pass from Chicago to Montreal? and (734) through what, by the shortest route, from Chicago to New York?

735. Mention the highest mountain of South America; (736-738) mention three South American countries traversed by the Andes mountains.

739. Mention six countries of Europe which border on the Atlantic or on the seas or bays connected with it, and (740) five countries in that part of Europe bordering on the Mediterranean; (741) bound Europe.

742. What great empire in the eastern part of Europe and extending into Asia? (743) Bound Asia.

744. What countries of Africa border on the Mediterranean Sea?

Examination XXVIII. Nov. 5, 1875.

(1:30-3:00 P. M.)

745. Within which Hemisphere (northern or southern, and eastern or western) is Australia included?

746. Give a similar statement in relation to the Hemispheres within which the Caribbean sea is included.

Define the (747) *equator*, (748) *tropics*, (749) *polar circles*, (750) *latitude* and (751) *longitude*.

752-760. Write, in the order of their succession from north to south, the names of the zones and of the circles which separate them.

What is the (761) *length* and (762) *breadth*, in degrees, of the zone crossed by the equator?

What (763) *bay* partly separates New Brunswick from Nova Scotia; and (764) what *strait*, Spain from Africa?

What parallels bound the United States, (765) westward from the Lake of the Woods, and (766) eastward from the River St. Lawrence, respectively?

767. What is the outlet of Lake Huron?

768. What is the capital of California, and (769) on what river is it situated ?

770. What river forms most of the boundary between Maryland and Virginia; and (771) where does it empty ?

772. Mention and describe the largest eastern branch of the Mississippi river.

773-775. Name the three largest of the West India Islands.

776. What and where is Terra del Fuego ?

777. What countries constitute Great Britain ?

778. What sea lies between Italy and Turkey ?

779. What mountains on the east of Norway ?

780. What larger river empties into the Black Sea from the west ?

781. What mountain between the Chinese Empire and Hindoostan ?

782. Where is the Empire of Japan, and (783) of what does it consist ?

784. Where is the Island of St. Helena (nearest which grand division, and in what ocean) ?

Examination XXIX. Feb. 25, 1876.

(1:30-3:00 P. M.)

785. What motion of the earth causes the alternation of day and night ?

What is the (786) *meridian*, and what the (787) *longitude* of a place ?

788. How does the *isthmus* differ from a *strait* ?

789. Which has at any time the longer day, Quito or Moscow ? (790) and why ?

791-793. Of what three departments does the United States government consist; and of what does each department consist ?

Mention the (794-795) two principal mountain systems of the United States, and (796-799) four groups or ranges belonging to the more easterly system.

800-804. Mention five cities on the Mississippi and its tributaries, and the State in which each is located.

805-811. Through what waters would a ship pass in sailing from St. Louis to Constantinople?

☞ Only seven answers are called for, though more might be given.

812-816. Mention and describe five rivers that empty into the Atlantic or its adjacent bays, between the Hudson and the Savannah.

Mention a country of South America (817) wholly north of the Equator; another (818) crossed by the Equator; and a third (819) wholly south of the Equator, but farther north than Patagonia.

820. What and where is the Crimea?

821. Mention and describe a river of Africa that empties into the Mediterranean Sea.

822. What mountain range on the joint border of France and Spain; (823) of Norway or Sweden; (824) of Russia and Siberia?

Examination XXX. June 9, 1876.

(1:30-3:00 P. M.)

825. Bound the territory of the United States.

826. Through what large bodies of water does a part of the northern boundary of the United States run?

827. Name the New England States.

829-836. Name the other States which border on the Atlantic.

837. What States border on the Pacific?

838. What mountain system is nearly parallel with the Atlantic coast; (839) into what do the rivers on the eastern slope flow, and (840) into what those on its western slope?

841. What great mountain system of the Western Hemisphere is nearly parallel with the Pacific, and into what do the rivers on its (842) eastern slope, and (843) those on its western, empty?

844. What range of mountains in Oregon?

845-846. Mention two ranges in California, and (847) one group in Arkansas.

848. What four countries of Europe are denominated empires?

849. Mention the capital of each of these empires.

850. Which of these empires extend into Asia?

851. What territory has France in Africa?

852-856. Starting southerly from the Straits of Gibraltar, through what bodies of water will a ship sail in passing around Africa to the place of starting?

857. How many times will she cross the equator?

858-861. What three prominent capes, and what large island will she pass?

862. Through what waters will a ship sail in passing easterly from Gibraltar to Calcutta; (863) what two prominent capes, and (864) what large island will she pass during the latter half of the voyage?

Examination XXXI. Nov. 10, 1876.

(1:30-3:00 P. M.)

865. Which oceans each extend across three zones; and (866) what are the names of those zones?

Mention (867) two grand divisions, and (868) two large islands that are crossed by the equator.

869-871. What three large bodies of land are crossed by the tropic of Capricorn?

872 How many degrees from Greenwich is the middle meridian of the Western Hemisphere ?

873-875. What are the three principal divisions of North America ?

876. Which is the wider: the Atlantic or the Pacific side of the United States ?

877-881. Mention five large bays and gulfs along the Atlantic side of North America.

882. Which ocean is most interspersed with islands ?

883. What recently acquired territory of the United States extends eastward from Behring's Strait to British America ?

848-885. Which two of the United States extend farthest south, and (886) what one farthest north ?

887. What river forms part of the north-east boundary of the United States; and (888) what river forms part of the south-west boundary ?

889. What city on the north shore of Lake Ontario ?

890-897. What States are adjacent to Tennessee ?

898-900. What countries (excluding islands) of Europe are either wholly or partly west of the meridian of Greenwich ?

901. In what direction is Ceylon from Japan ?

902. What gulf is connected with the Arabian Sea ?

903. Under what government is the country between the Mediterranean and Black Seas ?

904. What great mountain chain north of India ?





THE
REGENT'S QUESTIONS,
1866-1876.

GRAMMAR.

Examination I. Nov. 7, 1866.

(1:30-3:00 P. M.)

1. When are words said to be "*derivative*" and when "*compound*?" Give examples of each.
2. What classes of words are compared?, Give examples of the regular comparison of words both by prefixes and suffixes; also, of irregular comparison, and of words of the same classes which do not admit of comparison.
3. What are the names of the different classes of pronouns?
4. What particular pronouns are varied in form to denote gender?
5. Write sentences in which the relatives *who*, *which*, *what* and *that* are properly used.
6. What is meant by *case* in nouns and pronouns?

7. What *properties* (or *modifications, attributes, &c.*) have verbs?
8. What is *mood? tense?*
9. What moods cannot be used in interrogative sentences?
10. What tenses can be formed without auxiliaries?
11. Give the second person singular of the verb *be* in the several moods and tenses.
12. What class of verbs admit of the passive form, and of which principal part and which auxiliary verb is this form constructed? Give the first person singular passive of the verb *see*, in each of the moods and tenses.
13. What are the principal parts of the following verbs: *lay, lie, lead, make, ride, see, swim, write?*
14. Of what does syntax treat?

(3:30-4:30 P. M.)

Answer each of the questions annexed to the following sentence:—

“Of the committee who, in June, 1776, had been appointed to prepare the plan, Samuel Adams alone remained a member; and even he was absent when * * ‘articles of confederation and perpetual union’ were adopted, to be submitted for approbation to the several States.”—*Bancroft's U. S. History, Vol. IX, page 436.*

15. Of how many *propositions* (or *principal clauses*) does the above sentence consist, and with what word does each proposition end?
16. Give the leading *subject* and *predicate* of each proposition?
17. Designate the *subordinate* (or *auxiliary*) *clauses* (or *sentences*), and the subject and predicate of each.
18. Point out the several phrases, and the words which they respectively modify.
19. Mention all the connectives, and the words, phrases, &c., which they severally unite.
20. What words, phrases, &c., perform an *adjective* and what an *adverbial* office?

21. What kind of a noun is "committee?" "June?" "approbation?"

22. Are the following words respectively *primitive* or *derivative*: "appointed," "prepare," "absent," "fifteenth," "articles," "were," "States?"

23. Parse, "who," "1776," "member," "even," "were adopted," and "to be submitted."

24. Give the *voice* (or *form*), *mood*, *tense*, *person* and *number* of "had been appointed" and "remained."

Examination II. Feb. 28, 1867.

(1:30-3:00 P. M.)

"The best authors should be read by the student, that he may thus insensibly acquire a grace and refinement of expression which no arbitrary rules can give."

25. Parse "best" in the above sentence. [In parsing any word, be careful to give a full statement of its properties and relations, *i. e.*, its *etymology* and *syntax*.]

26. Give the *voice* (or *form*), *mood*, *tense*, *person* and *number* of "should be read."

27. Decline "student."

28. Parse "that."

29. What *auxiliary* verbs are used in the above sentence?

30. In what *mood* is "acquired."

31. In what *case* is "refinement."

32. Parse "which."

33. Transpose each *transitive* (or *active*) clause into its equivalent *passive* form and *vice versa*, and write out the full sentence in this changed form.

34. Into what *simple sentences* (or *clauses*) can the above sentence be separated?

35. Give the *subject* and *predicate* of each simple sentence.

36. Parse "*thus*."

37. What *parts of speech* (or *classes of words*) are not contained in this sentence?

38. Parse "*no*."

Pupils who have sufficient time may add a formal analysis of the above sentence, adopting any system with which they are familiar.

(3:30-4:30 P. M.)

39. Write the plural of *wharf*, *axis*, *focus*, *cherub*, *phenomenon*.

40. What is the difference between an adjective and an adverb?

41. Write a sentence having for its predicate the *passive*, *potential*, *present*, *third*, *plural* form of the verb *see*.

42. Give a list of ten words commonly used as prepositions.

43. What is the difference in the proper use of the relatives *who*, *which* and *that*?

44. Analyze the following sentence, according to any familiar system:—

"The use of a good dictionary should be insisted upon in the preparation of such lessons as are learned from books."

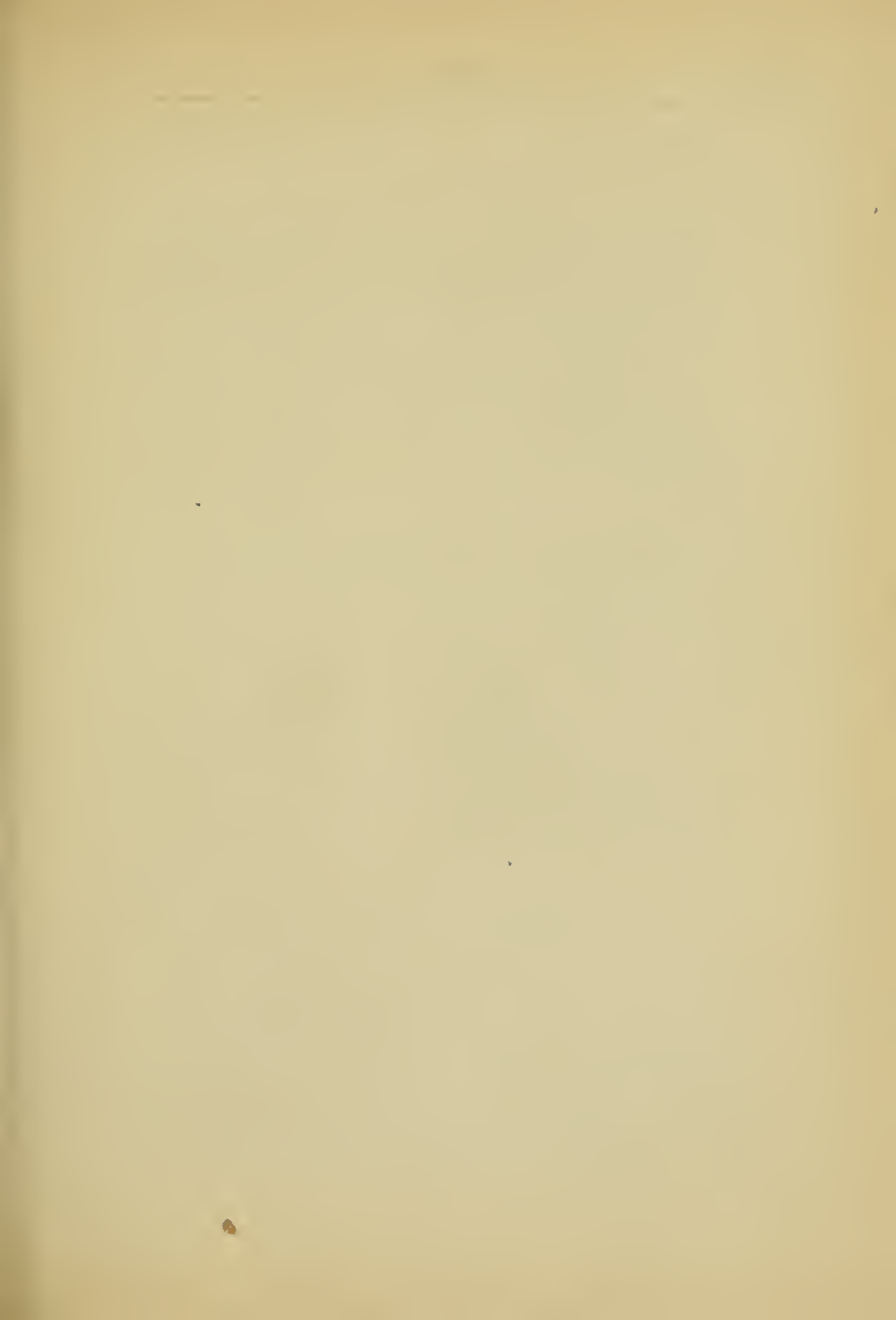
45. How may a declarative sentence be made interrogative?

46. In the sentence, "Our fathers, where are they?" parse "*fathers*."

47. Why is the sentence "John ought to have went" incorrect?

48. In what respect is the sentence,
"Whom do men say that I am,"
grammatically incorrect?

Pupils who have time, will please illustrate the answers to the second, fifth, sixth and seventh questions by appropriate examples.





Examination III. June 13, 1867.

(1:30-3:00 P. M.)

- (1) "God made the country and man made the town.
- (2) What wonder then that health and virtue, gifts
- (3) That can alone make sweet the bitter draught
- (4) That life holds out to all, should most abound
- (5) And least be threatened in the fields and groves?
- (6) Possess ye, therefore, ye who, borne about
- (7) In chariots and sedans, know no fatigue
- (8) But that of idleness, and taste no scenes
- (9) But such as art contrives, possess ye still
- (10) Your element; there only can ye shine."

—*Cowper's Task.*

49. How many letters in the first line of the above exercise are *liquids*?

50. Write the words in the first five lines which contain *diphthongs*, enclosing each diphthong in a parenthesis.

51. Which words in the sixth line are *dissyllables*?

52. Write the words in the exercise which are *trisyllables*, and mark the accented syllable in each.

53. Which line contains no *noun*?

54. What part or parts of speech (or classes of words) are not contained in the above exercise?

55. What *irregular verbs* occur in the exercise?

56. What *passive participle* (used only as such)?

57. What *verbs* in the exercise are in the *indicative mood*?

58. What *verbs* in the *potential mood*?

59. What *verbs* in the *imperative mood*?

60. What *adjectives* occur in the exercise?

61. What *personal pronouns*?

62. What *relative pronouns*?

Pupils who have sufficient time, are requested to arrange all other words in the above exercise into columns, according to the parts of speech (or classes of words) to which they belong; also to state how many, and what kind or kinds of feet are used in each line.

Accuracy in either of these items may be counted as one correct answer.

(3:30-4:30 P. M.)

63. In the sentence,
 "God made the country and man made the town,"
 what words, phrases or clauses does "*and*" connect?
64. What is the *leading subject* of the following sentence:—
- (1) "What wonder then that health and virtue, gifts
 (2) That can alone make sweet the bitter draught
 (3) That life holds out to all, should most abound
 (4) And least be threatened in the fields and groves?"
65. What is the *predicate* of the same sentence?
66. Parse "*that*" in the first line.
67. Parse "*that*" in the second line.
68. Parse "*that*" in the third line.
69. Parse "*health*" and "*virtue*," and the *verbs* of which they are the joint subject.
70. Parse "*wonder*" in the first line.
71. Parse "*gifts*" in the first line.
72. Parse "*sweet*" in the second line.

Pupils who have time, will please give an analysis of the above sentence, "*What wonder then.*" &c., according to any familiar system; with *one credit* for accuracy in this particular.

Examination IV. Nov. 7, 1867.

(1:30-3:30 P. M.)

73. What is a *suffix*?
74. What is the primitive of *indescribable*?
75. How are adjectives regularly compared?
76. Compare the adjective whose superlative is *last*?
77. What is the difference between an adjective and an adverb?

78. What are the different offices of *that*?
79. In the sentence, "*And is a conjunction,*" what part of speech is "*and*?"
80. Change the sentence, "*Latin is taught by Professor Smith,*" into the corresponding *active* form.
81. Make the same sentence both *active* and *interrogative*.
82. What part or parts of speech do not occur in the following sentence:—
 "Millions of spiritual creatures walk the earth unseen,
 Both when we wake and when we sleep."
83. Parse "*both*" in the above couplet.
84. Correct "*I done as well as I could,*" and give the reason for the correction.
85. Correct "*set down and rest,*" and give the reason for the correction.
86. Why is the sentence, "*John ought to have went,*" incorrect?

(3:30-4:30 P. M.)

"How gloriously, and yet how differently, has the Author of Nature lighted up the day by the resplendent sun, and the night by the moon and the starry host."

87. What is the *grammatical subject* of the above sentence?
88. What is the *grammatical predicate*?
89. Parse the *gram. subject*.
90. Parse the *gram. predicate*.
91. What is the *modified* or *logical predicate* of the above sentence?
92. Parse "*differently.*"
- Correct each of the following sentences, and give the reason for the correction:—
93. "Either ability or inclination were wanting."
94. "If I was a teacher I should give shorter lessons."
95. "We hoped to have heard from you before this."
96. "He has waxen all the threads."

Examination V. Feb. 20, 1868.

(1:30-3:00 P. M.)

97. Give the classifications of words according to their various *offices* in sentences.

98. Write a sentence containing a *compound word*.

99. Decline "ox" in both numbers.

100. Give a *numeral adjective* of the *ordinal kind*.

101. Write a sentence containing a *collective noun* and a *transitive verb*.

102. Parse "to be" in the sentence, "To be, contents his natural desire."

103. What tenses are used in the potential mood?

104. Give the synopsis of the verb "be" in the second person singular in all the tenses of the finite moods.

Parse "what" in each of the following sentences:—

105. *What!* art thou still unsatisfied?

106. *What* art thou doing?

107. *What* we possessed was taken.

Correct the following sentences, and give the reason for each correction:—

108. "Trust not him whom you know is dishonest."

109. "What signifies good opinions when our practices is bad?"

110. "If we study we learn."

(3:30-4:30 P. M.)

"When Boulton, the associate of the great Watt, showed his iron manufactory, he said, 'I sell here what all men are anxious to buy, Power.'"

Parse each of the following words, giving for *nouns*, the *class* or *kind*, *gender*, *person*, *number*, *case*, *agreement* or *government*, and *rule of syntax*; for *verbs*, the *principal parts*, *voice* or *form*, *mood*, *tense*, *person*, *number*, *agreement*, and *rule of syntax*:—

111 "Boulton;" (112) "showed;" (113) "said;" (114) "sell;" (115) "buy;" (116) "Power."

117. What *parts of speech*, or *classes of words*, (if any,) are not found in the above exercise ?

118. Separate the above exercise into the several *simple sentences* which it contains.

119. Change "sell" to the *passive form*, and reconstruct the part of the exercise which follows "said," to correspond in signification with this change of form.

120. Analyze the whole exercise, according to any approved system with which you are familiar.

Examination VI. June 4, 1868.

(1:30-3:00 P. M.)

- (1) "It is enacted in the laws of Venice,—
 (2) If it be proved against an alien,
 (3) That by direct or indirect attempts
 (4) He seeks the life of any citizen,
 (5) The party 'gainst the which he doth contrive,
 (6) Shall seize one-half his goods ; the other half
 (7) Comes to the privy coffer of the state ;
 (8) And the offender's life lies in the mercy
 (9) Of the duke only, 'gainst all other voice.
 (10) In which predicament I say thou stand'st :
 (11) For it appears by manifest proceeding,
 (12) That indirectly, and directly too —
 (13) Thou hast contrived against the very life
 (14) Of the defendant ; and thou hast incurred
 (15) The danger formerly by me rehearsed.
 (16) Down, therefore, and beg mercy of the duke.
 —*Merchant of Venice, Act IV, Scene 1.*

121. What parts of speech (or classes of words) are contained in the above exercise ?

122. Are there any *proper, collective, abstract* or *verbal* nouns in the exercise ? If so, make a list of them.

123. What words in the possessive case ?

124. Which line contains a noun ?

125. Which lines no pronoun, (expressed or understood ?)

126. Which line contains but two different parts of speech; and what are those parts of speech?

127. Compare an adjective in the exercise that admits of comparison.

128. Which lines of the exercise contain no finite verb?

129. Which lines have finite passive verbs; and what are those verbs?

130. Make a list of the different prepositions in the exercise.

131. Make a list of the adverbs, and the conjunctions, separately.

132. What following parts of the exercise does "it" in the first line stand for, or represent?

133. What does "it" in the second line represent?

134. What participle (used as such) in this exercise?

(3:30-4:30 P. M.)

135. In the clause, "*If it be proved against an alien,*" &c., in what mood is the verb, and why?

136. Parse "*only*" in the phrase, "*Of the duke only.*"

137. What is the principal or leading clause in the sentence, "*In which predicament I say thou stand'st.*"

138. Parse "*which*" in the same sentence.

139. Give the principal parts of "*say*" and "*stand'st.*"

140. Parse the verb in "*Thou hast incurred the danger,*" giving the voice (or form) mood, tense, person, number, subject, and rule of syntax.

141. Change the quotation in question number 140 to the *passive* form.

142. Parse "*down*" in the sentence, "*Down, therefore, and beg mercy of the duke,*" giving particulars required in question number 140.

143. In what case is "*mercy,*" and why?

144. Parse "*therefore.*"

Examination VII. Nov. 12, 1868.

(1:30-3:00 P. M.)

145. What are the plurals of *radius*, *parenthesis*, *phenomenon*, *brother-in-law*?

146. Compare *bad*, *beautiful*, *money*, *many*.

147. What classes of words (or parts of speech) are used to modify or limit other words in sentences?

148. Write a sentence containing *which* in the plural number, nominative case.

149. Write sentences in which the relatives *who*, *which*, *what* and *that* are properly used.

150. Parse "*what*" in the sentence, *This is precisely what was necessary*.

151. Give a list of all the moods and tenses used in conjugating verbs.

152. Give the second person, singular, passive of the verb *teach*, in each tense of the indicative mood.

153. What tenses, of what moods, can be formed without auxiliaries?

154. What are the principal parts of the verbs *make*, *ride*, *sit*, *write*?

Correct the following sentences:—

155. *I expected to have found him at home.*

156. *The letter from which the extract is taken, and came by mail, is lost.*

157. Give examples of adverbs of *time*, *place*, *negation* and *interrogation*.

158. Give four words commonly used as interjections.

(3:30-4:30 P. M.)

159. Write a sentence to illustrate the following rule of syntax:—

Two or more singular subjects taken separately require the verb to be singular.

160. What is the rule of syntax for the italicised word in the sentence, Did you see him *strike* the boy?

161. Correct the four following sentences :—

Let each love others better than themselves.

It was not me who took it.

Wisdom and not wealth procure esteem.

A nail well drove will support a great weight.

“To him who curbs desire within the bounds of ‘the enough,’

The wildest blasts that heave the sea awake no fear of wreck.”

In the foregoing sentence parse—

162. The *subject* of the principal clause ;

163. The *predicate* of the same clause ;

164. The first word, “*To* ;”

165. The last word of first line, “*enough.*”

166. Change “*The wildest blasts that heave the sea awake no fear of wreck,*” to the equivalent *passive form.*

167. Which words of the sentence are *relatives* ?

168. Analyze the sentence according to any system with which you are familiar.

Examination VIII. Feb. 18, 1869.

(1:30–3:00 P. M.)

169. Write a *proper noun* ; a *common noun* ; a *collective noun* ; and an *abstract noun*.

170. Give the possessive plural form of *motto*, *lady*, *thou* and *man*.

171. Write a sentence containing an *active transitive verb*, and change the same into the corresponding *passive form*.

172. Give a synopsis of the verb *teach* in the *first person, singular, active and passive*.

173. How do you distinguish *adjectives* from *adverbs* ?

174. Write an *ordinal adverb* ; an *adverb of manner* ; an *adverb of degree* ; and a *copulative conjunction*.

175. Give the correlatives of *lad*, *empress*, *czar* and *Francis*. [A masculine noun and its corresponding feminine are called correlative nouns.]

176. Correct the following in regard to capitals and punctuation :—

mister smith. will you please Excuse my son john next friday at 10 o'clock T Jenkins

177. Write four sentences: the first to contain *who*, in the second person, plural number; the second, *which*, singular number, objective case; the third, *whom*, masculine gender; the fourth, *that*, second person, singular number.

178. Correct the following sentences :—

He hadn't ought to have done it.

I do not know who she went with.

No country will allow of such a practice.

It was not me who took it.

179. Define the grammatical terms, *subject*, *predicate*, *mood*, *syntax*.

180. Compare all the words in the following couplet which admit of comparison :—

How far that little candle throws his beams!

So shines a good deed in a naughty world.

181. What classes of verbs take the same case after as before them?

182. Give an example to illustrate the last preceding question.

(3:30–4:30 P. M.)

(1) So live, that when thy summons comes to join

(2) The innumerable caravan, that moves

(3) To that mysterious realm, where each shall take

(4) His chamber in the silent halls of death,

(5) Thou go not like the quarry-slave at night,

(6) Scourged to his dungeon; but, sustained and soothed

(7) By an unfaltering trust, approach thy grave,

(8) Like one who wraps the drapery of his couch

(9) About him, and lies down to pleasant dreams.

183. Parse the predicate of the principal or leading clause.

184. Upon what does the infinitive "*to join*" depend; or, if you regard "*to*" as a preposition, what does it connect?

185. Give the *voice* (or *form*), *mood*, *tense* and *subject* of each verb in the second, third, fifth and seventh lines.

186. What *conjunctions* occur in the exercise, and what do they respectively connect?

187. Parse "*that*" wherever it occurs in the exercise.

188. Parse "*quarry-slave*," "*sustained*," "*one*," and "*to*" (in the last line.)

189. What are the principal parts of "*take*," "*go*," "*soothed*" and "*lies*?"

190. Make a list of all the *nouns* in the exercise.

191. What is the primitive of "*unfaltering*?"

192. Analyze the clause from "*but*" to "*dreams*," in clusive.

Examination IX. June. 10, 1869.

(1:30-3:00 P. M.)

"If we compare our English literature to a beautiful garden, where Milton lifts his head to heaven in the spotless chalice of the tall white lily, and Shakspeare scatters his dramas around him in beds of fragrant roses, blushing with a thousand various shades,—some stained to the core as if with blood, others unfolding their fair pink petals with a lovely smile to the summer sun,—what shall we find in shrub or flower so like the timid, shrinking spirit of William Cowper as that delicate sensitive-plant, whose leaves, folding up at the slightest touch, cannot bear even the brighter rays of the cherishing sun?"

193. Might the former and latter parts of the above exercise be mutually transposed without materially affecting the sense? and if so, state with what word such latter part begins.

194. Make a list of all the verbs in the exercise, including *participles*.

-
195. Which of these is the leading or principal verb ?
196. Give the principal parts of this leading or principal verb.
197. Make a list of all the participles, (not including those used as parts of the finite verbs referred to in question 194.)
198. Make a list of the several verbs from which these participles are derived.
199. Which of these participles are *active* and which are *passive* ?
200. Mention all the proper nouns in the exercise.
201. Mention any compound nouns which occur therein.
202. In what mood is "*compare*?"

(3:30-4:30 P. M.)

203. Make a list of such words in the above exercise as are used *adjectively*.
204. Which of the words included in the answer to question 193 are *participial adjectives* ?
205. What part of speech (or kind of word) is "*what*?"
206. In what case is the same "*what*," and why ?
207. In what case is "*spirit*," (second line ?)
208. What part of speech (or kind of word) is "*up*?"
209. In what mood is the last verb of the exercise ?
210. In what mood and tense is the first verb ?
211. In what case is "*sensitive-plant*?"
212. Select from the exercise three adjectives representing each of the different degrees of comparison.
213. Parse "*whose*."
214. Parse the leading or principal subject of the exercise, according to any method with which you are familiar.
215. Give an analysis or diagram.
216. Does the clause (beginning with "*If*" and ending with "*sun*") make complete sense taken by itself ?

Examination X. Nov. 11, 1869.

(1:30-3:00 P. M.)

217. What parts of speech (or classes of words) have cases?

218. What parts of speech (or classes of words) admit of comparison?

219. How do adjectives of more than two syllables generally form their comparative and superlative degrees?

220. Correct, "*The pleasures of the mind are more preferable than those of the body.*"

221. What is the subjunctive mood used to express?

222. Why is it called the "*subjunctive*" mood?

223. What tense would be used in speaking of an event which occurred during the past year, and without reference to any other date or event?

224. What class of verbs has no passive voice (or form)?

225. Construct a sentence having a verb in the potential mood.

226. Correct, "*I will be drowned; nobody shall help me!*"

227. Complete this sentence by supplying verbs in the infinitive mood, "*Grammar professes ——— us ——— correctly.*"

228. What rule of syntax is disregarded in the following sentence:—

"*The account, or journal, which was written by Magellan, and which seems to have been in existence as late as 1783, are lost.*"

229. Conjugate the verb "*learn,*" in the active, indicative, pluperfect (or prior past).

230. Conjugate the verb "*seek,*" in the passive, subjunctive, present.

(3:30-4:30 P. M.)

(1) Sir Isaac Newton drew close to the grate in which a fire had just been kindled.

(2) By and by it grew very hot.

(3) He rang the bell.

(4) The servant came.

(5) "Take away the grate," said the philosopher, "before I am burned to death."

(6) "Had you not better draw back your chair, sir?" said John, waggishly.

(7) "Upon my word," said Sir Isaac, laughing, "I had not thought of that."

231. Which sentence (if any) of the foregoing exercise contains no noun?

232. What sentences (or classes of sentences) in the exercise are not declarative?

233. If not declarative, what are they respectively?

234. What is the subject of the principal clause of the fifth sentence?

235. What are the subjects of the other clauses of the fifth sentence?

236. Give the principal parts of "drew," "kindled," "grew," "rang."

237. What four other irregular verbs in the exercise?

238. Which verbs of the exercise are in the passive voice (or form)?

239. Give the *voice* (or *form*), *mood*, *tense*, *person*, *number* and *subject* of the last verb of the exercise.

240. Parse one at least of the four following italicised words, taking your choice: "*had*" and "*draw*," (sixth sentence;) "*upon*," giving antecedent terms of relation, and "*that*," (seventh sentence.)

Examination XI. Feb. 17, 1870.

(1:30-3:00 P. M.)

- (1) *K. Henry*. "Therefore, my lords, omit no happy hour
- (2) That may give furtherance to our expedition:
- (3) For we have now no thought in us but France,
- (4) Save those to God. that run before our business.
- (5) Therefore, let our proportions for these wars
- (6) Be soon collected; and all things thought upon

- (7) That may, with reasonable swiftness, add
 (8) More feathers to our wings; for, God before
 (9) We'll chide this dauphin at his father's door.
 (10) Therefore, let every man now task his thought,
 (11) That this fair action may on foot be brought."
 —*Shakspear's King Henry V., end of Act 1.*

241. Make a list of all the *parts of speech* (or *classes of words*) represented in the above exercise.

242. Make a list of all the parts of speech (if any) not so represented

Give the part of speech of each of the following words:—

243. "*But*," (third line;) "*save*," (fourth line;) "*thought*," (third line;) "*thought*," (sixth line.)

244. "*That*," (second, fourth, seventh and eleventh lines, respectively.)

245. Make a list of all the *moods* represented in the exercise.

246. Give an example, from the exercise, of a verb in each mood so represented.

247. Parse "*things*," (sixth line.)

248. Parse "*before*," (fourth line.)

249. Parse "*before*," (eighth line.)

250. Parse "*chide*," (ninth line,) giving *principal parts, voice* (or *form*,) *mood, tense, person, number, subject and rule of syntax.*

251. In what case is each proper noun in the exercise?

252. To what does "*those*" (fourth line) refer?

253. Parse "*furtherance*," (second line.)

254. Parse "*brought*," (eleventh line,) as required in question 250.

(3:30-4:30 P. M.)

255. What is a *sentence*?

256. What are the *essential parts* (or *elements*) of sentences?

257. How are sentences classified in regard to *form*?

258. Give an example of a sentence in each of the varieties of form referred to in question 257.

259. Decline each of the personal pronouns.

260. Conjugate the verb "be," in all the tenses, persons and numbers of the indicative mood.

261. Conjugate the verb "know," in all the tenses, persons and numbers of the potential mood.

262. What is syntax?

263. Change the following sentence into the equivalent passive form:—

"Them that honor me, I will honor."

264. Change into the equivalent active form:—

"He was admitted into this institution by some gentlemen who had been his father's friends."

Examination XII. June 9, 1870.

(1:30-3:00 P. M.)

(1) 1. "The common belief that the scales of the crocodile
(2) will stop a bullet is very erroneous. 2. If a rifle is
(3) loaded with the moderate charge of two and a half
(4) drachms, it will throw an ounce ball through the
(5) scales of the hardest portion of the back; but were
(6) the scales struck obliquely, the bullet might possibly
(7) glance from the surface, as in like manner it would
(8) ricochet (rebound) from the surface of the water. 3.
(9) The crocodile is so difficult to kill outright, that peo-
(10) ple are apt to imagine that the scales have resisted
(11) their bullets. 4. The only shots that will produce
(12) instant death are those that strike the brain or spine
(13) through the neck."—*Baker's Nile Sources of Abyssinia.*

265. What is the grammatical subject of the first sentence of the exercise?

266. What is the logical subject (grammatical subject and its modifiers) of the same sentence?

267. What is the logical predicate of the first sentence?

268. Parse the grammatical subject, (question 265.)

269. Parse "will stop," (second line.)

270. Parse "*that*," (first line.)
271. Parse the first verb of the second sentence.
272. Parse "*it*," (fourth line.)
273. Parse "*through*," (fourth line.)
274. Parse the verb of the clause, "*but were the scales struck obliquely*," (fifth and sixth lines.)
275. Is the first sentence of the exercise *simple*, *compound* or *complex* in its construction?
276. Find an infinitive verb in the exercise, and parse it.
277. Find a relative pronoun, and parse it.
278. What are the principal parts of "*throw*," (fourth line.)

(3:30-4:30 P. M.)

279. Parse "*difficult*," (ninth line.)
280. Parse "*outright*," (ninth line.)
281. What part of speech (or class of words) is "*apt*," (tenth line.)
282. What part of speech is "*that*" in each of the four instances where it occurs in the ninth, tenth and eleventh lines?
283. Change "*the scales have resisted their bullets*" into the corresponding passive form, using the same words and only such additional ones as may be necessary.
284. Conjugate "*strike*" in all the tenses, persons and numbers of the potential mood passive voice (or form).
285. Change the latter sentence of the above exercise into the corresponding interrogative form, using precisely the same words, with only such change of arrangement as may be necessary.
286. What is the *primitive* of "*imagine*."
287. What *noun* in common use is derived from the same root as "*imagine*?"
288. What word may be used instead of "*that*" in the last sentence, without changing the sense or construction?

Examination XIII. Nov. 10, 1870.

(1:30-3:00 P. M.)

(1) 1. "It was, as I have said, a fine autumnal day, the
 (2) sky was clear and serene, and nature wore that rich
 (3) and golden livery which we always associate with the
 (4) idea of abundance. 2. The forests had put on their
 (5) sober brown and yellow, while some trees of the ten-
 (6) derer kind had been nipped by the frosts into brilliant
 (7) dyes of orange, purple and scarlet. 3. Streaming
 (8) files of wild ducks began to make their appearance
 (9) high in the air; the bark of the squirrel might be
 (10) heard from the groves of beech and hickory nuts, and
 (11) the pensive whistle of the quail at intervals from the
 (12) neighboring stubble-field.—*Irving's Legend of Sleepy*
 (13) *Hollow.*

289. Select from the exercise one example each of primitive, derivative, simple and compound words.

290. Select also a word containing three different liquids.

291. Give a specimen word in each of the degrees of comparison represented in the exercise.

292. Is the first sentence (or period) simple or compound; and declarative, imperative, interrogative or exclamatory?

293. Write the several independent propositions involved in the first sentence, placing each in a line by itself.

294. Which words of the third sentence (or period) are used as grammatical (or simple) subjects?

295. Which words of the same sentence are used as grammatical (or simple) predicates?

296. Parse the last grammatical subject of the exercise.

297. Parse the last grammatical predicate of the exercise.

298. What passive verbs occur in the exercise?

299. Select from the exercise a verb in the infinitive mood, and parse it.

300. What is the part of speech (or class of words) of each of the following: "As," (first line;) "on," (fourth line;) "yellow," (fifth line;) "high," (ninth line.)

301. Parse the verb in the ninth line.

302. Parse "at" and "from," (eleventh line.)

(3:30-4:30 P. M.)

Parse each of the following words, with special reference to accuracy and completeness:—

303. "Day," (first line.)

304. "Serene," (second line.)

305. "Wore," (second line.)

306. "That," (second line.)

307. "Livery," (third line.)

308. "Which," (third line.)

309. Change "*which we always associate with the idea of abundance*" to its equivalent as to meaning, but have the verb in the passive voice (or form.)

310. Change "*nature wore that rich and golden livery*" to the corresponding interrogative form (as an independent sentence.)

311. Which *tenses* are represented in the several verbs of the above exercise?


312. Why is "*associate*" in a different tense from either of the other verbs of the sentence? Or, if unable to answer the last question, you may tell whether "*have said*" is *transitive* or *intransitive*; and why, giving its object if it has one.

Examination XIV. Feb. 23, 1871.

(1:30-3:00 P. M.)

- (1) "29. And the time drew nigh that Israel must die; and
 (2) he called his son Joseph, and said unto him, If now
 (3) I have found grace in thy sight, put, I pray thee, thy

- (4) hand under my thigh, and deal kindly and truly with
 (5) me; bury me not, I pray thee, in Egypt:
 (6) "30. But I will lie with my fathers, and thou shalt
 (7) carry me out of Egypt, and bury me in their burying-
 (8) place. And he said, I will do as thou hast said.
 (9) "And he said, Swear unto me. And he sware unto
 (10) him. And Israel bowed himself upon the bed's
 (11) head."—*Genesis xlvii, verses 29-31.*

 All the questions refer to the above exercise.

313. What different letters represent *vowel* (or *vocal*) sounds?

314. Write four of the words containing *diphthongs* (or *digraphs*.)

315. What words of the 29th verse contain *silent double-consonants*?

Write a word (if any) belonging to each of the following classes, as indicated by *italics*, in questions 315 and 320, inclusive:—

316. NOUNS:

Common; proper; abstract; compound.

PERSONAL PRONOUNS:

317. First Person: *Sing. nom.; poss.; obj.; Plural.*

 d Person: " " " " "

319. Third Person: " " " " "

320. RELATIVE PRONOUNS.

321. VERBS:

Indicative; subjunctive; potential; imperative.

322. An *adjective; adverb; preposition; conjunction.*

323. What *tenses* occur in the 30th verse?

324. Write the *principal parts* of four of the irregular verbs.

325. Write the first person singular of the verb "carry" in each tense of the indicative mood.

326. What are the differences between "swear" and "sware" (*swore*,) (ninth line,) in respect to *principal parts, mood, tense* and *person*?

(3:30-4:30 P. M.)

327. What words might be used instead of "that," (first line?)

Parse the following words:—

328. The last verb in the first line.

329. The last verb in the second line.

330. "Hand," (third line.)

331. "With," (fourth line.)

332. "Thee," (fifth line.)

333. "Bury," (fourth and fifth lines.)

334. "Bed's," (tenth line.)

335. Give the equivalent grammatical expression for "the bed's head?"

336. What is the *modified* (or *logical*) *subject* of the sentence, "the time drew nigh that Israel must die?"

If any scholars have time to spare, they will please write out an analysis of the 29th verse, according to any system with which they are familiar.

Examination XV. June. 8, 1871.

(1:30-3:00 P. M.)

(1) 1. "Oliver Twist's ninth birthday found him a pale,
(2) thin child, somewhat diminutive in stature, and de-
(3) cidedly small in circumference. 2. But nature or
(4) inheritance had implanted a good sturdy spirit in
(5) Oliver's breast. 3. It had had plenty of room to ex-
(6) pand, thanks to the spare diet of the establishment;
(7) and perhaps to this circumstance may be attributed
(8) his having any ninth birthday at all. 4. Be this as it
(9) may, however, it *was* his ninth birthday; and he was
(10) keeping it in the coal cellar with a select party of
(11) two other young gentlemen, who, after participating
(12) with him in a sound threshing, had been locked up
(13) therein, for atrociously presuming to be hungry!"—
(14) *Dickens' Oliver Twist, Chap. II.*

337. Mention all the different *parts of speech* (or *classes of words*) included in the first proposition or sentence.

338. Which are the fundamental or essential words of the first sentence: *i. e.*, the *simple* (or *primary*) *subject*, *predicate* and *object*?

339. Which words of the first sentence are nouns in the objective case, and by what other word is each of these nouns governed?

340. Which words of the first sentence are adjectives, and to what substantive word does each of these adjectives belong?

341. Which words of the first sentence are adverbs, and what other words does each modify or limit?

342. Which words of the second sentence are conjunctions, and what particular words (or parts) of the exercise does each connect?

343. Give the *subject*, *mood*, *tense*, *person* and *number* of the verb in the second sentence.

344. What does "it" (fourth line) stand for or represent?

345. Change the second sentence to its full equivalent as to meaning, but having the verb in the *passive voice* (or *form*.)

346. Change the phrase "in Oliver's breast" to its equivalent, having the proper name in a different case.

347. What is the difference between the first and the second "had" in the fifth line of the exercise?

348. Mention the numerical adjectives contained in the exercise, specifying each as *cardinal* or *ordinal*.

349. What part of speech is "perhaps," (seventh line?)

350. What is the subject of "may be attributed," (seventh line?)

(3:30-4:30 P. M.)

Parse the following words contained in the above exercise, beginning with the third sentence, fifth line:—

351. "To," (seventh line.)

352. "Having," (eighth line.)

353. The *finite verb* in the seventh line.
354. "*Birthday*," (eighth line.)
355. "*Birthday*," (ninth line.)
356. "*Who*," (eleventh line.)
357. "*After*," (eleventh line.)
358. "*Presuming*," (thirteenth line.)
359. "*Hungry*," (thirteenth line.)
360. Any one of the verbs in the *infinitive mood*.

Examination XVI. Nov. 9, 1871.

(1:30-3:00 P. M.)

1. "Sir, we are not weak, if we make a proper use of those means which the God of nature hath placed in our power. 2. Besides, sir, we shall not fight our battles alone. 3. There is a just God who will raise up friends to fight our battles for us. 4. If we were base enough to deserve it, it is now too late to retire from the contest. 4. There is no retreat but in submission and slavery. 5. Our chains are forged; their clanking may be heard on the plains of Boston. 6. Is life so dear, or peace so sweet as to be purchased at the price of chains and slavery? 7. I know not what course others may take; but as for me, give me liberty, or give me death!"

361. Make a list of all the nouns in the first sentence.

362. Make a list of all the words used adjectively in the first sentence.

363. Give the principal parts of all the verbs in the first and second sentences.

364. Select from the above exercise a verb to represent each one of the different *moods* used in it, mentioning the mood of each one named.

365. Make a list of the tenses in the *indicative mood*, and then draw a line across the names of those not in this exercise.

366. Make a list of all the passive verbs in the exercise.

367. Decline the personal pronoun of the first person,

and the personal pronoun of the third person, neuter gender; then draw a line across each word of these lists that does not occur in the exercise.

368. What part of speech (or kind of word) is “*sir*” in the first and second sentences?

369. Compare such adjectives of the first and fourth sentences as admit of comparison.

370. What is the difference, as to *syntax*, between the first and the second ‘*it*’ in the fourth sentence?

371. What word is the *subject* of the fifth sentence?

372. What is the *predicate* (*grammatical* or *unmodified*) of the second sentence?

373. Give an example, from the exercise, of the following kinds of sentences: *declarative*, *interrogative*, *imperative*.

374. Change the sixth sentence so that the same thought may be expressed, but using verbs in the *active voice* (or *form*) only.

The following question may be answered in the place of any one of the foregoing, if preferred:—

What is the difference, as to *syntax*, between “*me*” and “*death*” in the seventh sentence?

(3:30-4:30 P. M.)

Parse the following words contained in the above exercise:—

375. The second *verb* of the first sentence.

376. “*Which*,” (first sentence.)

377. The third *verb* of the first sentence.

378. The last *verb* of the third sentence.

379. “*Enough*,” (fourth sentence.)

380. “*Retreat*,” (fifth sentence.)

381. “*Clanking*,” (sixth sentence.)

382. The second *verb* of the sixth sentence.

383. “*What*,” (seventh sentence.)

384. The last *verb* of the seventh sentence.

Examination XVII. Feb. 27, 1872.

(1:30-3:00 P. M.)

1. "A country schoolmaster had two pupils, to one of whom he was partial, and to the other severe. 2. One morning it happened that these two boys were late, and were called up to account for it. 3. 'You must have heard the bell, boys; why did you not come?' 4. 'Please, sir,' said Tom, (the favorite,) 'I was dreaming that I was going to Margate, and I thought the school-bell was the steamboat-bell.' 5. 'Very well,' said the master, glad of any pretext to excuse his favorite. 6. 'And now, Bill, turning to the other, 'what have you to say?' 7. 'Please, sir,' said the puzzled boy, 'I—I—I was waiting to see Tom off.'"

Parse the following words contained in the above exercise:—

- 385. The noun used as the subject of the first sentence.
- 386. "*Whom*," (first sentence.)
- 387. The first noun of the second sentence.
- 388. The third verb of the second sentence.
- 389. "*Account*," (second sentence.)
- 390. The first verb of the third sentence.
- 391. "*Boys*," (third sentence.)
- 392. The second verb of the third sentence.
- 393. "*Steamboat-bell*," (fourth sentence.)
- 394. "*Glad*," (fifth sentence.)
- 395. "*What*," (sixth sentence.)
- 396. "*Have*," (sixth sentence.)
- 397. The last word of the sixth sentence.
- 398. "*Off*," (seventh sentence.)

(3:30-4:30 P. M.)

- 399. Give an example of an adjective derived from a proper noun.
- 400. Into what three (or four) classes are words divided, as to the number of their syllables?
- 401. Give the first person plural of "go" in all the tenses of the indicative mood.

402. Give the passive, potential, pluperfect, third, singular of "*examine*."

403. Give ten words commonly used as prepositions.

404. What is the *subject word* of the sentence constituting question 400 above?

405. Of what does *syntax* treat?

406. Write a sentence (or two sentences, if you prefer,) in which the words "*set*" and "*sit*" are properly used.

407. Correct, "If John had went to school, he would not now deserve punishment; but he done as he pleased and must take the consequences."

408. Give a reason for each correction of false syntax made in your answer to question 406.

Scholars who have sufficient time may re-write the following letter, with the needed corrections as to general arrangement, capitals and punctuation; and the satisfactory execution of the whole, including penmanship, will be allowed as two correct answers:—

baltimore feb 10 1872 dear father i have just returned from washington where i spent two days very pleasantly i visited the capitol and saw mr browns cousin charles sumner who is you know one of the senators from massachusetts i also saw president grant and many other distinguished men whom i have not time to mention is mother well what did john get from santa clause has maria finished arithmetic this is rough paper bad ink and o what a pen in haste good bye your affectionate son john kennedy.

Examination XVIII. June 6, 1872.

(3:30–4:30 P. M.)

1. "As a man who was deeply involved in debt was walking in the street with a very melancholy air, one of his acquaintances asked him why he was so sorrowful.
2. 'Alas!' said his friend, 'I am in a state of insolvency.'
3. 'Well,' said his friend, 'if that is the case, it is not you, but your creditors, who ought to wear a woeful countenance.'

Write each one of the following words, with its number prefixed, and immediately thereafter, the *part of speech* (or *class of words*) to which it belongs:—

First sentence: (409) *As*; (410) *who*; (411) *deeply*; (412) *debt*; (413) *in*; (414) *air*; (415) *one*; (416) *acquaintances*; (417) *asked*; (418) *why*; (419) *sorrowful*.

Second sentence: (420) *Alas*; (421) *he*; (422) *am*.

Third sentence: (423) *Well*; (424) *that*; (425) *but*; (426) *your*; (427) *ought*; (428) *wear*.

Write each one of the following words with its number prefixed, and immediately thereafter the word (or words) to which it is related as a principal element, (*subject*, *predicate* or *object*,)—if this be the case,—or to which it belongs as an adjunct, if it have either adjective or adverbial force:—

First sentence: (429) *man*; (430) *who*; (431) *very*; (432) *melancholy*; (433) *asked*; (434) *him*; (435) *sorrowful*.

Second sentence: (436) *he*; (437) *state*; (438) *insolvency*.

Third sentence: (439) *said*; (440) *his*; (441) *that*; (442) *case*; (443) *not*; (444) *creditors*; (445) *ought*; (446) *wear*; (447) *woeful*; (448) *countenance*.

Select from the first sentence a word in the (449) *nominative case*; one in the (450) *possessive case*; and one in the (451) *objective case*. [Number answers as before.]

Mention the (452) *first verb* of the exercise, and give its (453) *voice* (or *form*), (454) *mood*, (455) *tense*, and (456) *subject*.

Give the (457) *first*, (458) *second*, (459) *third*, and (460) *fourth principal parts* of the last verb of the exercise.

Give the *third person, singular number*, of the first verb in the second sentence in each of the tenses of the indicative mood: *i. e.*, (461) *present*; (462) *imperfect* (or *past*); (463) *future*; (464) *perfect* (or *prior present*); (465) *pluperfect* (or *prior past*); (466) *future perfect*.

Give the (467) *comparative*, and the (468) *superlative* forms of the last adjective of the exercise.

(3:30-4:30 P. M.)

469. What word of the exercise has no *syntax*, (or grammatical relation to other words?)

470. Select from the exercise an example of a *simple sentence* (or *independent proposition*.)

471. Is the first sentence *simple* or *compound*, or *complex* in its construction?

472. Answer the same question (471) with reference to the second sentence.

473. What is the *grammatical subject* of the principal (or independent) clause of the third sentence?

474. Change "*was walking*" to the form of the *pluperfect* (or *prior past*) *tense* of the same mood.

475. Change the verb of the expression "*was deeply involved*" to the *potential mood*, *perfect* (or *prior present*) *tense* of the same *voice* (or *form*.)

476. Change "*one of his acquaintances asked him*" to its equivalent, having the verb in the *passive form*.

477. Change "*if that is the case*" so that the verb shall be *subjunctive* in form.

478. In what number is "*who*," (third sentence?)

479. In what words was the question referred to in the first sentence put by the asker (or speaker?)

480. What words does "*with*" in the first sentence connect or show the relation between?

481. What interrogative word occurs in the first sentence?

482. What kind of a conjunction is "*but*?"

483. In what case is the word "*case*," (third sentence?)

484. In what tense is "*caught*," (third sentence?)

485. In what case is "*countenance*," (third sentence?)

486. What word (potential mood sign) might be substituted for "*ought to*," (third sentence?)

487. Of what word is "*woeful*" compounded?

488. Which one of the five permanent vowels does not occur in "*countenance*?"

Examination XIX. Nov. 7, 1872.

(1:30-3:00 P. M.)

1. "Sing to me, dearest nightingale," said a shepherd to the silent songstress, one beautiful spring evening.

2. "Alas!" said the nightingale, "the frogs make so much noise that I have no inclination to sing. Do you not hear them?"

3. "Undoubtedly I hear them," replied the shepherd, "but it is owing to your silence."

Write each one of the following words, with its number prefixed, and immediately thereafter the *part of speech* (or *class of words*) to which it belongs:—

First paragraph: (489) *Sing*; (490) *to*; (491) *me*; (492) *dearest*; (493) *nightingale*; (494) *spring*.

Second paragraph: (495) *Alas*; (496) *so*; (497) *that*; (498) *no*.

Third paragraph: (499) *Owing*.

Write each of the following words, with its number prefixed, and immediately thereafter describe it as the *subject*, *predicate*, *object*, *adjective-adjunct* (or *modifier*), or *adverbial-adjunct*,—as the case may be,—of the word to which it is syntactically related:—

First paragraph: (500) *Sing*; (501) *said*; (502) *silent*; (503) *songstress*; (504) *one*; (505) *evening*.

Second paragraph: (506) *Noise*; (507) *inclination*; (508) *sing*.

Third paragraph: (509) *Owing*; (510) *silence*.

Select from the third paragraph a word in the (511) *nominative*, one in the (512) *possessive*, and one in the (513) *objective case*.

Mention the (514) *second verb* of the second paragraph; and give its (515) *voice* (or *form*;) (516) *mood*; (517) *tense*; and (518) *subject*; also the (519) *first*, (520) *second*, and (521) *third principal parts* of the same verb.

Change "*frogs make*" to each corresponding tense-form of the indicative and potential moods, viz: (522)

Indicative imperfect (or *past*;) (523) *future*; (524) *perfect* (or *prior present*;) (525) *pluperfect* (or *prior past*;) (526) *future perfect*; (527) *potential present*; (528) *imperfect* (or *past*;) (529) *perfect* (or *prior present*;) (530) *pluperfect* (or *prior past*.)

Give the (531) *positive* and (532) *comparative* forms of the first adjectives; also the (533) *comparative* and (534) *superlative* of the last adjective in the first paragraph that admits of comparison.

Select from the exercise a *personal pronoun* of each of the following forms: (535) *First person, singular number, nominative case*; (536) *first, singular, objective*; (537) *second person, singular, nominative*; (538) *second person, singular, possessive*; (539) *third person, singular, nominative*; (540) *third person, plural, objective*.

Give the word which each *prepositional phrase* (or *ad-junct* modifies:—

First paragraph: (541) ———; (542) ———; (543) ———
(*preposition understood*.)

Second paragraph: (544) ——— (*infinitive*.)

Third paragraph: (545) ———.

(3:30–4:30 P. M.)

Mention two of the *prepositional phrases* that are used *adjectively*: (546) ———; (547) ———; and two used *ad-verbially*: (548) ———; (549) ———, in this exercise.

550. Change “*shepherd*” to the corresponding word denoting the feminine gender.

551. What is the grammatical gender of “*nightingale*?” and (552) why?

553. What word of the exercise has no *syntax* or grammatical relation to other words?

554. What noun of the first paragraph is *independent*, as to *case*?

555. Is the first paragraph a *simple*, or a *compound*, or a *complex* sentence?

556. Answer the same question for the second paragraph, first sentence; and (557) second sentence; and for the (558) third paragraph.

559. Change "*Do you hear them?*" to the corresponding declarative form.

560. Change "*the frogs make so much noise*" to the equivalent expression, having the verb in the *passive voice* (or *form*.)

561. From what primitive word is "*owing*" derived?

562. Why is not "*owing*" spelled *oweing*?

563. Give the *prefix*, and each *suffix* (or *affix*) (564, 565) of "*undoubtedly*."

566. What is the *subject* of the *principal* (or *independent*) clause of the third paragraph?

567. What is the *subject* of each *subordinate* (or *dependent*) clause of the third paragraph?

568. What *substantive* word, or expression, does the pronoun "*it*" stand for in the third paragraph?

Examination XX. Feb. 27, 1873.

(1:30-3:00 P. M.)

- (1) A wasp met a bee that was just buzzing by,
- (2) And he said, "Dear cousin, can you tell me why
- (3) You are loved so much better by people than I?"

- (4) Why, my back is as bright and as yellow as gold,
- (5) And my shape is most elegant, too, to behold;
- (6) Yet nobody likes me for that, I am told!"

- (7) Says the bee, "My dear cousin, it's all very true;
- (8) But, then, they would love me no better than you,
- (9) If I were but half as much mischief to do!"

Select from the exercise an example of each of the following classes of words:—

First line: (569) *Noun*; (570) *verb, irregular*; (571) *verb, progressive form*; (572) *adverb*.

Second line: (573) *Pronoun, second person*; (574) *pronoun, objective case*; (575) *adjective*; (576) *conjunction, copulative*.

Third line: (577) *Verb, passive*; (578) *preposition*.

Write each one of the following words, and the *part of speech* (or *class of words*) to which it belongs:—

First line: (579) *That*; (480) *by*.

Second line: (581) *Why*.

Third line: (582) *Better*.

Sixth line: (583) *Nobody*; (584) *that*.

Seventh line: (585) *All*.

Eighth line: (586) *Than*.

Ninth line: (587) *But*; (588) *half*; (589) *much*.

Give the four *principal parts*: *i. e.*, first, *indicative present*; second, *indicative imperfect, past or present*; third, *participle, present or imperfect*; fourth, *participle, perfect or past*, of each of the following verbs:—

First line: *Met*; (590) ———; (591) ———; (592) ———; (593) ———.

Third line: *Is*; (594) ———; (595) ———; (596) ———; (597) ———.

Sixth line: *Told*; (598) ———; (599) ———; (600) ———; (601) ———.

Write each of the following words, and describe it as *subject, predicate, object, or modifier*, of the word to which it syntactically belongs, giving that word:—

First line: (602) *Wasp*; (603) *bee*; (604) *that*.

Second line: (605) *You*; (606) *me*.

Third line: (607) *Better*; (608) *I*.

Fourth line: (609) *Yellow*; (610) *gold*.

Fifth line: (611) *Elegant*.

Sixth line: (612) *That*.

Seventh line: (613) *Bee*.

Ninth line: (614) *Mischief*

Mention four *prepositional* (including *infinitive*) *phrases*

used adverbially in the exercise: (615) ———; (616) ———; (617) ———; (618) ———.

Change "A wasp met a bee" to each of the other corresponding tense forms of the *indicative mood*, viz: (619) *Present* ———; (620) *perfect*, or *prior present* ———; (621) *pluperfect*, or *prior past* ———; (622) *future* ———; (623) *future perfect* ———.

(3:30-4:30 P. M.)

624. Change "was buzzing" to the corresponding *simple* form.

625. Change "can you tell me" to the corresponding *declarative* form.

626-627. Change the third line to the equivalent expression, having the verb in the *active voice* (or *form*.)

628. What would be the corresponding *active* form of "I am told" in the sixth line?

629. What *transitive verb* occurs in the ninth line?

630. What is the corresponding *passive* form of "to behold" in the fifth line?

Select from the exercise a verb belonging to each of the following classes: (631) *Subjunctive mood*; (632) *potential, present*; (633) *potential, imperfect, or past*; (634) *infinitive*.

635. What is the *positive* form of the word "better" in the third and eighth lines?

636. Is the first line, as a sentence, *simple* or *compound*, or *complex*?

637. Select from the exercise a *simple sentence* (or *clause*) containing a *transitive verb*.

638. To what other word is "but" in the ninth line equivalent?

639. What other form of expression may be substituted in the ninth line for "If I were to do?"

Mention the different punctuation marks that occur in the exercise: (640) ———; (641) ———; (642) ———; (643) ———; (644) ———.

645. What are the marks “ ” called, and (646) what do they denote?

647. What is the mark in *it's* called, and (648) what does it denote?

Examination XXI. June. 5, 1873.

(1:30-3:00 P. M.)

- (1) “Will you give my kite a lift?” said my little nephew
 (2) to his sister, after trying in vain to make it fly by
 (3) dragging it along the ground. Lucy very kindly took
 (4) it up and threw it into the air; but her brother,
 (5) neglecting to run off at the same moment, the kite
 (6) fell down again.
 (7) “Ah! now, how awkward you are!” said the little
 (8) fellow.
 (9) “It was your fault entirely,” answered his sister.
 (10) “Try again, children,” said I. “There is an old proverb
 (11) which says, ‘Perseverance conquers all things.’”—
 (12) *Charlotte Elizabeth.*

Select from the exercise:—

First line: A word used as (649) *subject*; (650) *object*,
direct; (651) *verb, principal*; (652) *verb, auxiliary*.

Second line: (653) *A dissyllable*; (654) *a derivative word*.

Third line: (655) A word containing a *diphthong*; an
 (656) *adverb of manner*, and of (657) *degree*, or *quantity*.

Write each one of the following words and the *part of speech* (or *class of words*) to which it belongs, as here used:—

First line: (658) *Lift*; (659) *little*.

Second line: (660) *After*; (661) *trying*; (662) *make*;
 (663) *fly*.

Third line: (664) *Along*.

Fourth line: (665) *But*.

Fifth line: (666) *Off*.

Sixth line: (667) *Down*.

Seventh line: (668) *Ah!* (669) *awkward*.

Give the four principal parts (including the *participle in ing*) of each of the *irregular verbs* in

Third line: (670) —; (671) —; (672) —; (673) —.

Fourth line: (674) —; (675) —; (676) —; (677) —.

Seventh line: (678) —; (679) —; (680) —; (681) —; (682) —; (683) —; (684) —; (685) —.

Write each of the following words, and describe it as *subject, nominative, predicate, object, adjective modifier, adverbial modifier, or attribute*, of the word (expressed or understood) to which it is syntactically related, *giving that word*:—

Eleventh line: (686) *Perseverance*; (687) *conquers*; (688) *all*; (689) *things*.

Tenth and eleventh lines: (690) *Proverb*; (691) *I*; (692) *an*; (693) *which*.

Ninth and Tenth lines: (694) *Try*; (695) *fault*.

Second line: (696) *Trying*; (697) *make*.

698. Which noun in the exercise has no syntactical relation to other words?

Change "*the kite fell down*" to each of the other tense forms of the indicative mood, prefixing to each form the name of the tense: (699) —; (700) —; (701) —; (702) —; (703) —.

(3:30-4:30 P. M.)

Compare "*little*" in the first line: (704) —; (705) —; (706) —.

What would be the corresponding (707) *declarative* and (708) *imperative* forms of "*Will you give my kite a lift?*"

709. What derivative of "*vain*" might be substituted for "*in vain*" in the second line?

Mention each *infinitive verb* in the exercise: (710) —; (711) —; (712) —.

713. What noun does the first "*my*" in the first line represent?

714. Answer the same question in regard to the second "*my*" in the first line.

Give the (715) *mood*, (716) *person*, and (717) *number* of "try" in the tenth line.

718. How would "conquers" be written if spelled according to its elementary sounds?

719. What special *rule*, or *remark*, of *syntax* is applicable to "fly" in the second line?

720. What words after "I" in the tenth line might be omitted without impairing the sense?

721. What relation was the writer (Charlotte Elizabeth) to Lucy and her brother, judging from the above narrative?

722. Why is not the first word in the eleventh line spelled *perseverance*?

723. Change the eleventh line to its equivalent, having the verb in the *passive voice* (or *form*.)

Change the answer to question 723 to express each of the other tenses of the *indicative passive*: (724) ———; (725) ———; (726) ———; (727) ———; (728) ———.

Examination XXII. Nov. 6, 1873.

(1:30-3:00 P. M.)

- (1) A person who called one day at a house at which his
 (2) visits had been more frequent than welcome, was told
 (3) by the servant that her master had gone away.
 (4) "Oh, well, never mind," said he, "I'll speak to your
 (5) mistress."
 (6) "She has also gone out, sir," the maid replied.
 (7) Not liking to be denied admission, the man said:—
 (8) "As it is a cold day, I'll step in and sit by the fire a
 (9) few moments."
 (10) "Ah, sir, but that is *gone out*, too," said the girl; by
 (11) which time the luckless visitor concluded that it was
 (12) best for him to *stay out*.

Write each one of the following words and its *part of speech* (or *class of words*) as here used:—

First line: (729) *Who*; (730) *one*; (731) *at*.

Second line: (732) *Visits*; (733) *more*; (734) *than*.

Third line: (735) *That*; (736) *away*.

Fourth line: (737) *Never*; (738) *mind*.

Sixth line: (739) *Sir*.

Seventh line: (740) *Liking*.

Tenth line: (741) *That*.

Eleventh line: (742) *Concluded*.

Twelfth line: (743) *Best*.

744-746. Select from the exercise and write in a column the first ten words which are used as simple *subjects*, numbering them (747-756) inclusive, and opposite each one of these write the *verb* agreeing with it.

757-759. Select from the exercise an *adjective* of each degree of comparison.

Give the four principal parts (including the *participle* in *ing*) of each of the *irregular verbs* in

Second line: (760) —; (761) —; (762) —; (763) —; (764) —; (765) —; (766) —; (767) —.

Seventh line: (768) —; (769) —; (770) —; (771) —.

Eighth line: (772) —; (773) —; (774) —; (775) —.

Write each of the following words and describe it as *subject*, *nominative*, *predicate*, *object*, *adjective modifier*, *adverbial modifier*, or *attribute*, of the word (expressed or understood) to which it is syntactically related, *giving that word*:—

First line: (776) *Day*; (777) *house*; (778) *his*.

Second line: (779) *Welcome*.

Fourth line: (780) *Never*; (781) *mind*.

Seventh line: (782) *Liking*; (783) *admission*.

Eighth line: (784) *Day*; (785) *sit*.

Eleventh line: (786) *Which*.

(3:30-4:30 P. M.)

787-788. Mention each *infinitive verb* in the exercise.

What nouns do the following *pronouns* stand for:—

First line: (789) *His*.

Fourth line: (790) *Your*.

Twelfth line: (791) *Him*.

792-793. Mention each *relative pronoun* in the exercise and its *antecedent*.

Write the following words and give the *gender* of each according to its signification as here used:—

First line: (794) *Person*; (795) *which*.

Third line: (796) *Servant*.

Eleventh line: (797) *Visitor*.

798. What word (not included in the exercise) denoting *masculine gender* corresponds to *maid*?

799. What word denoting *feminine gender* corresponds to *sir*?

800-801. Mention the *passive verbs* contained in the exercise.

802-803. Give the *mood* and *tense* of “*sit*” in the eighth line.

804. Change “*A person was told by the servant*” to the equivalent expression having the verb *active*.

805. To which of the following classes of words does “*wel(l)come*” in the second line belong: *Primitive*, *derivative*, *simple*, or *compound*?

806. Why is “*liking*” in the seventh line spelled without an *e*?

807-808. Change “*I’ll step in*” in the eighth line to each of the other tense forms of the *indicative active*, giving the tense name of each.

Examination XXIII. Feb. 26, 1874.

(1:30-3:00 P. M.)

(1) A Fir, upon a humble Thorn.

(2) From his high top, looked down with scorn.

(“For loftiest spires we grow,” he said;

(“Of us the tallest masts are made,

(While thou, poor Bramble, canst produce

, Nothing of ornament or use.”

) “Great tree,” the modest Thorn replied,

- (8) "When the sharp axe shall pierce your side,
 (9) In vain you then may wish to be,
 (10) Unsought for and unknown like me."

Write each one of the following words and its *part of speech* (or *class of words*) as here used:—

First line: (809) *Upon*; (810) *humble*.


Second line: (811) *Looked*; (812) *down*.

Eighth line; (813) *Side*.

Ninth line: (814) *Then*; (815) *wish*.

Tenth line: (816) *Unknown*; (817) *like*.

Select from the exercise, and write in a column, eight words which are used as simple *subjects*, numbering them from (818–827) inclusively; and opposite each of these *subjects* write the verb (*principal* and *auxiliary*, if any,) agreeing with it.

Give the rule of syntax for (828) *subject* words, and that for (829) *finite verbs*. [ The language of the rule, and not merely its number, is to be given.]

Write in a column all the *finite verbs* in the exercise, (including *auxiliaries*, if any,) and opposite each verb give its *voice* (or *form*), *mood*, *tense*, *person* and *number*, arranging the work thus:—

<i>Finite Verb.</i>	<i>Voice.</i>	<i>Mood.</i>	<i>Tense.</i>	<i>Person.</i>	<i>Number.</i>
—.	(830) —;	(831) —;	(832) —;	(833) —;	(834) —.
—.	(835) —;	(836) —;	(837) —;	(838) —;	(839) —.
—.	(840) —;	(841) —;	(842) —;	(843) —;	(844) —.
—.	(845) —;	(846) —;	(847) —;	(848) —;	(849) —.
—.	(850) —;	(851) —;	(852) —;	(853) —;	(854) —.
—.	(855) —;	(856) —;	(857) —;	(858) —;	(859) —.
—.	(860) —;	(861) —;	(862) —;	(863) —;	(864) —.
—.	(865) —;	(866) —;	(867) —;	(868) —;	(869) —.

(3:30–4:30 P. M.)

What nouns do the following pronouns stand for:—

Second line: (870) *His*.

Eighth line: (871) *Your*

872. What is the grammatical gender of "we" in the third line?

Write in a column all the *prepositional phrases* contained in the first four lines of the exercise, and before each phrase write the word to which such phrase syntactically relates: (873) —; (874) —; (875) —; (876) —.

Give the four principal parts (including the *participle in ing*) of the verb in the fourth line: (877) —; (878) —; (879) —; (880) —.

Change the fifth and sixth lines to the equivalent expression, having the verb *passive*. If correct in all respects, the answer may count as (881) —; (882) —; (883) —.

In what case is (884) "use" in the sixth line?

What is the *syntax* of (885) "Bramble" in the fifth line?

886. Change the ninth line to the corresponding form, having the verb in the *indicative* mood.

Change the eighth line to the corresponding forms, having the verb in the (887) *perfect*, or *future perfect tense*, and in the (888) *second future*, or *future perfect tense*.

What "figure of speech" is employed in the above exercise? The correct answer to this question may be counted as one.

Examination XXIV. June. 4, 1874.

(1:30-3:00 P. M.)

889-896. Make a list of the eight *parts of speech* (or *classes of words*) and define each.

897. Compare an *adjective* by one of the two regular modes of comparison, and an (898) *adverb* by the other.

Write the plurals of (899) *Elegy*; (900) *church*; and (901) *piece*; and state in what way each plural is formed.

According to what rule or principal is (902) *writing* made *writing*; and (903) *n* doubled in *beginning*?

Write in a column the following names, with the prefixed numbers, and annex to each name an example of the class which it represents: (904) *Vowel*; (905) *liquid*; (906) *palatal*; (907) *double consonant*; (908) *diphthong*; (909) *word, primitive*; (910) *derivative*; (911) *compound*; (912) *sentence, simple*; (913) *compound*; (914) *adjective, ordinal*.

915-918. What *modifications (properties or accidents)* belong to nouns, and what are the several kinds of each?

Mention two *modifications* belonging to verbs only, with their kinds: (919) ———; (920) ———.

Conjugate the verb "see" according to the following outline:—

921. PRINCIPAL PARTS (including *participle in ing*.)
writing its name over each part.

—————; —————; —————; —————.

INDICATIVE MOOD, First Person, Plural.

<i>Name of Tense.</i>	<i>Active Form.</i>	<i>Passive Form.</i>
922 —————	—————	—————
923 —————	—————	—————
924 —————	—————	—————
925 —————	—————	—————
926 —————	—————	—————
927 —————	—————	—————

POTENTIAL, Third, Plural.

928 —————	—————	—————
929 —————	—————	—————
930 —————	—————	—————
931 —————	—————	—————

SUBJUNCTIVE, Third, Singular.

932 —————	—————	—————
933 —————	—————	—————

IMPERATIVE, Second, Plural.

934 —————	—————	—————
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INFINITIVES.

935 _____

936 _____

PARTICIPLES.

937 _____

938 _____

(3:30-4:30 P. M.)

(1) "GRAY'S '*Elegy Written in a Country Churchyard*' is
 (2) a masterpiece from beginning to end. The thoughts,
 (3) indeed, are obvious enough, but the dignity with which
 (4) they are expressed, the immense range of allusion and
 (5) description with which they are illustrated, and the
 (6) finished grace of the language and versification in
 (7) which they are embodied, give to this work something
 (8) of that inimitable perfection of design and execution
 (9) which we see in an antique statue or a sculptured
 (10) gem."—*Shaw's English Literature.*

Analyze the first sentence of the exercise, giving (939) the *simple* (or *grammatical*) *subject*; (940) the *simple predicate*; (941) the *modifier* (or *logical*) *subject*; and (942) the *modified predicate*.

Write in a column all the *prepositional phrases* in the first sentence of the exercise, and prefix to each the word (or words) which it modifies: (943) _____; (944) _____; (945) _____.

Parse (946) *written*; (947) *country*; (948) *masterpiece*.

Write each of the following words and describe it as *subject*, *predicate*, *object*, *adjective modifier*, *adverbial modifier*, or *attribute*, as the case may be, of the word or words to which it is syntactically related, *giving such word or words*:—

Third line: (949) *Obvious*; (950) *enough*.

Fourth line: (951) *They*; (952) *range*.

Fifth line: (953) *Which*.

Sixth and seventh lines: (954) *Give*; (955) *versification*; (956) *something*.

Ninth line: (957) *Which*.

958-965. Write in a column all the *personal* and *relative pronouns* of the exercise in the order in which they occur, and annex to each the noun or nouns (expressed or understood) for which it stands.

If the last word of the second line were made singular, what other words following in the sentence would also, on that account, require to be changed as often as each occurs? (966) _____ to _____; (967) _____ to _____.

968. Change "*which we see*" in the ninth line to the equivalent expression, having the verb *passive*.

Examination XXV. Nov. 5, 1874.

(1:30-3:30 P. M.)

Define each of the following grammatical terms: (969) *Grammar*; (970) *English Grammar*; (971) *a letter of the alphabet*; (972) *a syllable*; (973) *a word*; (974) *a phrase*; (975) *a clause*; (976) *a sentence*.

977-980. Into what *four parts* is grammar usually divided?

981. Which one of those parts is usually studied in the spelling book?

982. To which one of those parts does *punctuation* belong?

Mention the several *modifications* (*properties* or *accidents*) of *nouns*; the different kinds of each modification; and give a specimen noun of each kind, arranging the whole thus:—

MODIFICATIONS.	KINDS OF EACH.	SPECIMEN NOUNS.
983 _____	985 _____	{ _____ 987 _____ { _____ 988 _____ { _____ 989 _____
984 _____	986 _____	{ _____ 990 _____ { _____ 991 _____ { _____ 992 _____



993	995	}	_____	997	_____
			_____	998	_____
			_____	999	_____
994	996	}	_____	1000	_____
			_____	1001	_____
			_____	1002	_____

1003-1007. Decline each of the personal pronouns, arranging the work in regular form.

1008. Mention four words commonly used as relative pronouns.

Give an example of a (1009) *regular*, and of an *irregular comparison* of adjectives.

1010-1015. Give the *passive, first person, plural* forms of the verb "*examine*" in the several tenses of the *indicative mood*, prefixing the name of the tense of each form.

1016. Give the *active imperative*, the (1017) *passive infinitive*, and the (1018) *participial* forms of same verb.

(3:15-4:15 P. M.)

- (1) "If our overworked professional men and students
 (2) should imitate Sir Henry Holland in taking an annual
 (3) two months' vacation, and once a year, like Antæus,
 (4) touch old mother earth among the salmon and trout
 (5) streams of the breezy Canadian hills or Adirondacks,
 (6) they would return vastly invigorated to battle with the
 (7) realities of city life. Let no novice be deterred from a
 (8) trial, for he will find it very exhilarating, even if for
 (9) a time he take no fish."—*The Galaxy*, Nov., '74, p. 617.

Write the first *verb* of the exercise, and give its (1019) *subject*; (1020) *object*; (1021) *mood*; and (1022) *tense*.

Write each of the following words and describe it as *subject, predicate, object, adjective modifier, or adverbial modifier*, as the case may be, of the word or words (expressed or understood) to which it is syntactically related, giving such word or words:—

First line: (1023) *Overworked*.

Second line: (1024) *Taking*.

Third line: (1025) *Months*; (1026) *vacation*; (1027) *year*; (1028) *Antæus*.

Fourth line: (1029) *Touch*; (1030) *mother*; (1031) *earth*; (1032) *trout*.

Fifth line: (1033) *Streams*; (1034) *Adirondacks*.

Sixth line: (1035) *Invigorated*; (1036) *battle*.

Seventh line: (1037) *City*.

Ninth line: (1038) *He*; (1039) *it*; (1040) *very*; (1041) *exhilarating*.

1042. What *passive verb* occurs in the exercise?

1043. Change "*even if for a time he take no fish*" in the ninth and tenth lines to the equivalent expression, having the verb *passive*.

1044. Give the four principal parts of "*take*" in the tenth line, (including the participle in *ing*.)

1045. Parse "*If*," (first line.)

1046. Parse "*In*," (second line.)

1047. Parse "*Old*," (fourth line.)

1048. Parse "*No*," (seventh line.)

In parsing give the *rule of syntax* for each of these words.

Examination XXVI. Feb. 25, 1875.

(1:30-3:00 P. M.)

1049. Write and define or describe each of the following *grammatical terms*: (1050) *Person*; (1051) *number*; (1052) *case*; (1053) *pronoun*; (1054) *relative pronoun*; (1055) *tense*; (1056) *interjection*.

1057. Write a *sentence* (or *sentences*) containing eight different *parts of speech* (or *classes of words*), and (1058-1065) above one word of each class write the name of the part of speech to which it belongs.

Write an example of (1066) a *noun* in the *possessive case*; (1067) a *personal pronoun* in the *first person, plural*; (1068) a *relative pronoun* in the *objective form*; and a (1069) *verb* in the *passive, indicative, present*.

Write the different kinds of each *modification* (*property* or *accident*) of *verbs* as named below, and give an example of each kind from the verb "see," with a subject prefixed, arranging the work thus:—

MODIFICA- TIONS.	KINDS OF EACH MODIFICATION.	EXAMPLES from verb <i>see</i> , with subjects.
<i>Voice,</i> (or <i>Form.</i>)	—1070 { _____ _____	{ 1084 _____ 1085 _____
<i>Mood.</i>	{ 1071 _____ 1072 _____ 1073 _____ 1074 _____ 1075 _____	{ 1086 _____ 1087 _____ 1088 _____ 1089 _____ 1090 _____
<i>Tense.</i>	{ 1076 _____ 1077 _____ 1078 _____ 1079 _____ 1080 _____ 1081 _____	{ 1091 _____ 1092 _____ 1093 _____ 1094 _____ 1095 _____ 1096 _____
<i>Person.</i>	—1082 { _____ _____	1097 { _____ _____
<i>Number.</i>	—1083 { _____ _____	1098 { _____ _____

Answers to the following supplementary questions may be added, for which due credit will be given:—

1099. What is the name of that part of Grammar which includes the classification and inflection of words?

Give a suitable form or model for parsing (1100) a *noun*; (1101) an *adjective*; (1102) a *relative pronoun*; and (1103) a *preposition*.

Mention a *numerical adjective* of the (1104) *cardinal* and one of the (1105) *ordinal* kind.

1106 Give the principal parts of the verb "give."

(3:15-4:15 P. M.)

(1) "Socrates was never in haste that his followers should
 (2) become skilful in speaking, in action, or in invention;
 (3) but, previously to such accomplishments, he thought
 (4) it proper that a love of self-control should be instilled
 (5) into them; for he considered that persons who had
 (6) acquired those qualifications were, if devoid of self-
 (7) control, only better fitted to commit injustice and do
 (8) mischief."—*Memorabilia*, IV., iii. 1.

Mention the (1107) *subject*; (1108) the *simple* (or *grammatical*) *predicate*; (1109) the *modified* (or *logical*) *predicate*; and (1110) the *adjuncts* (or *modifiers*) contained in the proposition, "*Socrates was never in haste.*"

1111. By what is this proposition further modified, limited or explained in the exercise?

1112. Write the proposition beginning with "*his*," (first line,) and give (1113) the *simple* (or *grammatical*) *subject*; (1114) the *modified* (or *logical*) *predicate*; (1115) the *copulative* and (1116) the *attribute* of the *predicate*; (1117) the *adjunct* (or *modifier*) of the *subject*; and (1118) the *adjuncts* (or *modifiers*) of the *predicate*. (Designate each of these answers by one of the above names.)

What other words of the exercise are used as <i>simple</i> (or <i>grammatical</i>) <i>subjects</i> ?	Write after these subjects, the verbs (<i>principal</i> and <i>auxiliary</i> , if any,) agreeing with them:—
---	---

1119 _____	1124 _____
1120 _____	1125 _____
1121 _____	1126 _____
1122 _____	1127 _____
1123 _____	1128 _____

Which verbs of the exercise are in the *potential mood*? (1129) _____; (1130) _____; and which in the *infinitive*? (1131) _____; (1132) _____.

Compare (1133) the adjective in the second line; and (1134) "*better*" in the seventh line.

Parse (1135) "*previously*" in the third line; and (1136) the first *verb* in the sixth line.

Examination XXVII. June 3, 1875.

(3:30-4:30 P. M.)

1137. Mention the *four general divisions* of Grammar. Under which of these general divisions is each of the following subjects included:—

1138. *Classification of words as to use.*

1139. *Classification of letters*

1140. *Rules for agreement and government of words.*

1141. *Versification (or poetry.)*

1142. *Rules for spelling.*

Give a proper definition of each of the following terms. Be careful to mention the term defined, in connection with each definition: (1143) *Verb*; (1144) *passive verb*; (1145) *irregular verb*; (1146) *intransitive verb*; (1147) *mood*; (1148) *potential mood*; (1149) *tense*; (1150) *future tense*; (1151) *preposition*; (1152) *conjunction*.

Write a sentence containing, respectively, an example of

1153. *An adjective in the comparative degree.*

1154. *An adverb of manner.*

1155. *A disjunctive conjunction.*

1156. *An infinitive verb without "to" prefixed.*

1157. *A relative pronoun in the objective case.*

1158. Why are certain parts of verbs called *principal parts*?

1159-1161. Which are the *three principal parts* of verbs, (other than the *present participle*?)

Write (1162) a *regular verb*, and (1163) an *irregular verb*, and place after each its additional *principal parts*, (including the *participial in ing.*)

1164. Decline the *personal pronoun* of the *third person*, *feminine gender*.

Give an example of the comparison of adjectives (1165) by *prefixes*, and (1166) by *suffixes*.

Give the rule of syntax for

1167. A *verb* agreeing with two or more subjects connected by "*and*."

1168. A *pronoun*, as related to its antecedent noun.

1169. For same cases before and after verbs.

1170. For a verb in the infinitive mood.

1171-1183. Give the *active* and *passive* forms of "strike," with "I" (or "thou") as the subject of each, in the several tenses of the finite moods; also, (1184) the *present infinitives*, and (1185) *present participles*, *active* and *passive*.

(3:15-4:15 P. M.)

(1) "Our fathers raised their flags against a power to
(2) which, for purposes of foreign conquest and subjugation,
(3) Rome, in the height of her glory, is not to be
(4) compared,—a power which has dotted the surface of
(5) the whole globe with her possessions and military posts,
(6) whose morning drum-beat, following the sun in his
(7) course and keeping pace with the hours, circles the
(8) earth with one continuous and unbroken strain of the
(9) martial airs of England."—*Webster*.

1186. Write the first *verb* of the exercise and give its *subject* and *object*.

What other (1187) *finite verbs*, what (1188) *infinitive* and (1189) *participles* occur in the exercise?

1190. Change "*which has dotted the surface of the whole globe*" to the equivalent expression, having the verb in the *passive voice* (or *form*.)

1191-1198. Write in a column (midway between the right and left sides of your paper) the several prepositions in the first, second, fourth and eighth lines, and place before and after each preposition the words between which it shows relation.

Write each of the following words, giving its *part of speech* (or *class*), and describe it as the *subject*, *object*, *predicate*, *adjective modifier*, or *connective*, as the case may be, of the word or words to which it is syntactically related, giving such word or words:—

First line: (1199) *Their*.

Second and third lines: (1200) *Subjugation*; (1201) *Rome*.

Fourth line: (1202) *Surface*.

Fifth and sixth lines: (1203) *Posts*; (1804) *whose*; (1205) *and*; (1206) *sun*.

Seventh line: (1207) *Keeping*; (1208) *circles*.

Eighth line: (1209) *Strain*.

1210. In what case is "*power*" in the fourth line?

Parse (1211) the *first verb*, and (1212) the *second verb* in the third line; (1213) *morning*, (1214) *drum-beat*, (1215) *following*, in the sixth line.

☞ In parsing be careful to give the *properties (modifications or attributes)* of *nouns* and *verbs*, and the *syntax* of each word.

1216. Select a *derivative word* from the eighth line.

Examination XXVIII. Nov. 4, 1875.

(1:30-3:00 P. M.)

1. "Sing to me, dearest nightingale," said a shepherd to the silent songstress, one beautiful spring evening.

2. "Alas!" said the nightingale, "the frogs make so much noise that I have no inclination to sing. Do you not hear them?"

3. "Undoubtedly I hear them," replied the shepherd, "but it is owing to your silence."

Write each one of the following words, with its number prefixed, and immediately thereafter the *part of speech* (or *class of words*) to which it belongs:—

First paragraph: (1217) *Sing*; (1218) *to*; (1219) *me*; (1220) *dearest*; (1221) *nightingale*; (1222) *spring*.

Second paragraph: (1223) *Alas*; (1224) *so*; (1225) *that*; (1226) *no*.

Third paragraph: (1227) *Owing*.

Write each one of the following words, with its number prefixed, and immediately thereafter describe it as the *subject*, *predicate*, *object*, *adjective modifier*, or *adverbial modifier*, as the case may be, of the word to which it is syntactically related:—

First paragraph: (1228) *Sing*; (1229) *said*; (1230) *silent*; (1231) *songstress*; (1232) *one*; (1233) *evening*.

Second paragraph: (1234) *Noise*; (1235) *inclination*; (1236) *sing*.

Third paragraph: (1237) *Owing*; (1238) *silence*.

Select from the third paragraph a word in the (1239) *nominative*, one in the (1240) *possessive*, and one in the (1241) *objective case*.

Mention the *second verb* of the second paragraph, and give its (1242) *voice* (or *form*;) (1243) *mood*; (1244) *tense*; and (1245) *subject*; also, the (1246) *first*, (1247) *second*, and (1248) *third principal parts* of the same verb.

Change "*frogs make*" to each of the other tense forms of the *indicative* and *potential moods*, giving the names of tenses, and arranging them as follows:—

TENSES.	INDICATIVE MOOD.	POTENTIAL MOOD.
<i>Present.</i>	<i>Frogs make.</i>	(1254) _____
_____	(1249) _____	(1255) _____
_____	(1250) _____	(1256) _____
_____	(1251) _____	(1257) _____
_____	(1252) _____	
_____	(1253) _____	

Give the (1258) *positive* and (1259) *comparative* forms of the first adjective; also, the (1260) *comparative* and (1261) *superlative* of the last adjective in the first paragraph that admits of comparison.

Select from the exercises a *personal pronoun* of each of the following forms: (1262) *First person, singular number, nominative case*; (1263) *first person, singular, objective*; (1264) *second person, singular, nominative*; (1265) *second person, singular, possessive*; (1266) *third person, singular, nominative*; (1267) *third person, plural, objective*.

Give the word which each *prepositional phrase* (or *ad-junct*, modifies:—

First paragraph: (1268) _____; (1269) _____; (1270) _____ (*preposition understood*.)

Second paragraph: (1271) ——— (*infinitive.*)

Third paragraph: (1272) ———.

Parse (1273) *Undoubtedly*; (1274) *I*; (1275) *hear*; (1276) *them.*

(3:15-4:15 P. M.)

1. "As a man, who was deeply involved in debt, was walking in the street with a very melancholy air, one of his acquaintances asked him why he was so sorrowful.

2. 'Alas!' said he, 'I am in a state of insolvency.'

3. 'Well,' said his friend, 'if that is the case, it is not you, but your creditors, who ought to wear a woeful countenance.'

1277. What word of the exercise has no *syntax*?

1278. Select from the exercise an example of a *simple sentence* (or *independent preposition.*)

1279. Is the first sentence *simple* or *compound*, or *complex*?

1280. What is the *grammatical subject* of the principal (or independent) clause of the third sentence?

1281. Change "*was walking*" to the form of the *pluperfect* (*past perfect* or *prior past*) tense of the same mood.

1282. Change the verb of the expression "*was deeply involved*" to the *potential mood*, *perfect* (*present perfect* or *prior present*) tense of the same *voice* (or *form.*)

1283. Change "*one of his acquaintances asked him*" to its equivalent, having the verb in the *passive voice*.

1284. Change "*if that is the case*" so that the verb shall be *subjunctive* in form. and (1285) parse "*case.*"

1286. In what number is "*who*" in the third sentence?

1287. In what words was the question referred to in the first sentence put by the asker (or speaker?)

1288. What words does "*with*" in the first sentence connect or show the relation between?

1289. What interrogative word occurs in the first sentence?

1290. What kind of conjunction is "*but*?"

1291. In what case is the word "case" in the third sentence?

1292. In what tense is "ought" in the third sentence?

1293. In what case is "countenance" in the third sentence?

1294. What word (potential mood sign) might be substituted for "ought to" in the third sentence?

1295. Of what word is "woeful" compounded?

1296. Which one of the five permanent vowels does not occur in "countenance?"

Examination XXIX. Feb. 24, 1876.

(1:30-3:00 P. M.)

1297-1298. Mention and define the two parts of speech (or classes of words) most frequently used.

Decline, in full, (1299) *we*; (1300) *her*; (1301) *who*.

Give the two positives of (1302-1303) *worse*, and those of (1304-1305) *most*.

Write a sentence (or sentences) in which *that* is properly used as (1306) a *relative*; (1307) an *adjective*; (1308) a *conjunction*.

1309. Correct, "*The teacher sent for you and I,*" and (1310) give the reason for the correction.

1311. Change the sentence, "*Those girls are writing on their slates,*" by making the subject singular, and the words corresponding in sense.

1312. What kind of a sentence, as to form, is that quoted in question 1311; and (1313) what would the sentence become if changed to the *interrogative* form?

1314-1315. Change the sentence, "*I shall go,*" and "*I will go,*" by making each subject of the third person, singular, and by using the proper auxiliary to express *future time* simply, in the former sentence, and a *purpose* or *determination* in the latter.

1316-1317. Correct, "Four month's interest are due on this note," and (1318-1319) give the reasons for each correction.

Define (1320) *mood*; (1321) *tense*; (1322) *person*; (1323) *number*; as applied to *verbs*.

1324-1328. Write in a column the names of the several moods of verbs, and after each name give a *sentence* containing a verb in that mood.

1329-1335. Write in a column the names of the several tenses of verbs, and after each name give the corresponding tense-form of some verb in the indicative mood.

Give the principal parts of (1336) *rise*; (1337) *raise*; (1338) *sit*; (1339) *set*; and (1340-1342) write sentences containing an example of the proper use of each of these verbs.

How is the (1343) *passive voice* (or *form*) of any verb formed? and how the (1344) *progressive form*?

Write two sentences, in one of which (1345) a *phrase*, and in the other (1346) a *clause* (or *proposition*) is used as the subject.

Give the principal parts of each of the following verbs: (1347) *were*; (1348) *went*; (1349) *had fought*; (1350) *might have been found*; (1351) *may have talked*.

Analyze the sentence, (1352) "Let him go;" (1353-1355) and parse each word.

1356. What particular name is given to that part of a verb which ends in *ing*?

(3:15-4:15 P. M.)

- (1) "These things that are not practicable, are not desirable." (2) "There is nothing in the world really beneficial that does not lie within the reach of an informed understanding and a well-directed pursuit. There is nothing that God has judged good for us that he has not given us the means to accomplish, both in the natural and the moral world. If we cry, like children, for the moon, like children we must cry on."—Burke.

Write each of the following words, with its number prefixed, mention its *part of speech* (or *class of words*), and describe it as the *subject*, *predicate*, *object*, *adjective modifier*, *adverbial modifier*, or *connective*, as the case may be, of the word or words to which it is grammatically related, giving such word or words:—

First line: (1357) *That*; (1358) the *second verb*.

Second line: (1359) *Nothing*; (1360) *beneficial*.

Third line: (1361) The *verb* in that line.

Fourth line: (1362) *Pursuit*.

Fifth line: (1363) *That*.

Sixth line: (1364) *Us*.

Seventh line: (1365) *Like*.

Eighth line: (1366) *On*.

Make a list of the (1367) *auxiliary verbs* in the exercise, and the (1368) *conjunctions*.

Parse each of the following as contained in the exercise.

☞ In parsing, give each *modification* (*property* or *accident*) and the *syntax* of each word:—

1369. The *proper noun*.

1370. The *verb* in the *infinitive mood*.

1371. The *verb* in the *potential mood*.

1372. The *verb* in the fifth line.

1373. "*Children*," (eighth line.)

1374. What is the *principal* (or *leading*) *clause* (or *proposition*) of the last sentence of the exercise; and (1375) what the *subordinate clause*?

1376. Parse "*both*," (sixth line.)

Examination XXX. June. 8, 1876.

(1:30-3:00 P. M.)

1377. Of what does *Etymology* treat?

1378. What are the *parts of speech* or classes into which words are divided?

1379. Which of these modify, limit, or qualify the meaning of nouns ?

1380. Which of verbs, adjectives and adverbs ?

1381. What is the *subject* of a sentence ?

1382. What is the *predicate* ?

“The pleasures of sense resemble a foaming torrent, which, after a disorderly course, speedily runs out and leaves an empty and offensive channel.”

1383-1387. In the above sentence, name the *nouns*, and state of each whether it is *subject* or *object*, and *of what* ?

1388. Name the *pronoun*, and state the same of it.

1389-1391. Name the *adjectives*, and the noun each qualifies.

1392-1393. Name the *adverbs*, and the word each modifies or qualifies.

1394-1395. Name the *prepositions*, and the words between which they show the relation.

1396-1397. Name the *conjunctions*, and the words each connect.

1398-1401. Name the *articles*, and the nouns they limit.

Name the plural of the following nouns : (1402) *lady* ; (1403) *valley* ; (1404) *painful* ; (1405) *memorandum* ; (1406) *analysis*.

1407. What *modifications* or *properties* have nouns and pronouns ?

1408. What have verbs ?

1409-1413. Give the modifications of each of the nouns of the sentence, “The pleasures of sense,” etc.

1414-1416. Same of the verbs.

1417-1418. How do you determine the modifications of pronouns ?

1419. What tenses has the Potential mood ?

1420. Define *mood*, and (1421) name the several moods.

1422. Same of *tense*, and (1423) the several tenses.

1424-1426. Give an example of the moods of the verb *write*, in the present tense, with *boy* as subject, *i. e.*, those moods to which such a subject is applicable.

(3:15-4:15 P. M.)

1427. How are verbs divided in regard to *form* ?
 1428. How in regard to *signification* ?
 1429. What determines the number and person of a verb ?
 1430. Does the object of a verb influence its number and person ?
 1431. In what case is the *subject* of a verb ?
 1432. In what the *object* ?
 1433. Have the *nominative* and *objective cases* of nouns *different forms* ?
 1434. How are these cases determined ?
 1435. To what is a noun in the possessive case joined ?
 1436. What does the noun with which it is joined denote ?

If the following sentences are ungrammatical, correct them, and parse the word corrected.

- 1437-1438. They thought it was me.
 1439-1440. I do not know who to send.
 1441-1442. The man sets in the chair.
 1443-1444. The book lays on the table.
 1445-1446. The eldest of the two sons attends school.
 1447-1448. The general with his soldiers were taken.
 1449-1450. The room is twenty feet long.
 1451-1452. To preach and to practise is very different.
 1453-1454. Write the participles of the verb *love* in the *active form*, with the name of each.
 1455-1456. The same of the passive form.

Examination XXXI. Nov. 9, 1876.

(1:00-3:00 P. M.)

In what classes are simple words divided with reference to their (1457-1459) number of syllables ; (1460-1461) formation ; (1462-1469) use in sentences ?

1470. Give the singular of *men, teeth, mice*.

How are adjectives regularly compared to express degrees of comparison (1471) below the positive (or of diminution), and (1472-1473) above the positive (or of increase)?

1474-1476. Give examples of comparison to illustrate answers 1471-1473.

1477. What modification have some adverbs?

1478. From what other class of words are many adverbs derived?

1479. Mention four general classes of adverbs.

1480-1482. Mention three kinds of pronouns, and give a definition of each kind.

1483-1488. Write the objective singular of each simple pronoun whose form is varied by declension, and after each of these objectives write a sentence containing it.

1489-1491. Which of the pronouns indicate, by their form, the gender of their antecedent nouns?

1492. To what parts of speech do cases belong?

1493-1494. What classes of verbs do not admit of a passive voice (or form)?

1495. Define the subjunctive mood.

1496-1498. Which mood cannot be used in asking questions?

1499-1502. Which tenses employ auxiliaries?

1503. What tense must be used to denote that a certain event will precede some other event referred to?

What parts of speech (or kinds of words) are needed to complete the two following sentences?

1504. It must be done——to-day——to-morrow.

1505. Live——peace——all men.

1506-1508. What three principal statements are included in the exercise of parsing; or, of what does parsing consist?

(3:15-4:15 P. M.)

Write, and parse in full each italicized word in the following sentence, (including auxiliaries, of course, with their principal verbs) :

1509-1520. "The *best authors* should be *read by the student*, that *he* may *thus* insensibly *acquire* a grace and *refinement* of expression *which* no arbitrary rules can give."

Correct the following examples of false syntax, and give the reason for the correction, and the syntax of the corrected word in each :

1521-1522. He is to be married to I don't know who.

1523-1524. Generation after generation pass away.

1525-1526. Young's "Night Thoughts" are a gloomy but instructive poem.

1527-1528. On that occasion, neither he nor I were consulted.

1529-1530. Which is the largest number,—the minuend or the subtrahend ?

1531-1532. Pitt was the pillar who upheld the state.

1533-1534. Our teacher told us that air had weight.

1635-1536. I intend to have written to him.

NOTE.—In the plates from which the complete illustrated volume and the first editions of this pamphlet were printed, the numbers of the questions from Examination XII were too great by 24, the last question in XI being numbered 264, and the first in XII 289. In this edition, the error has been corrected. The corresponding questions in the other editions may be found by adding 24 to all numbers above 264 in this edition.

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